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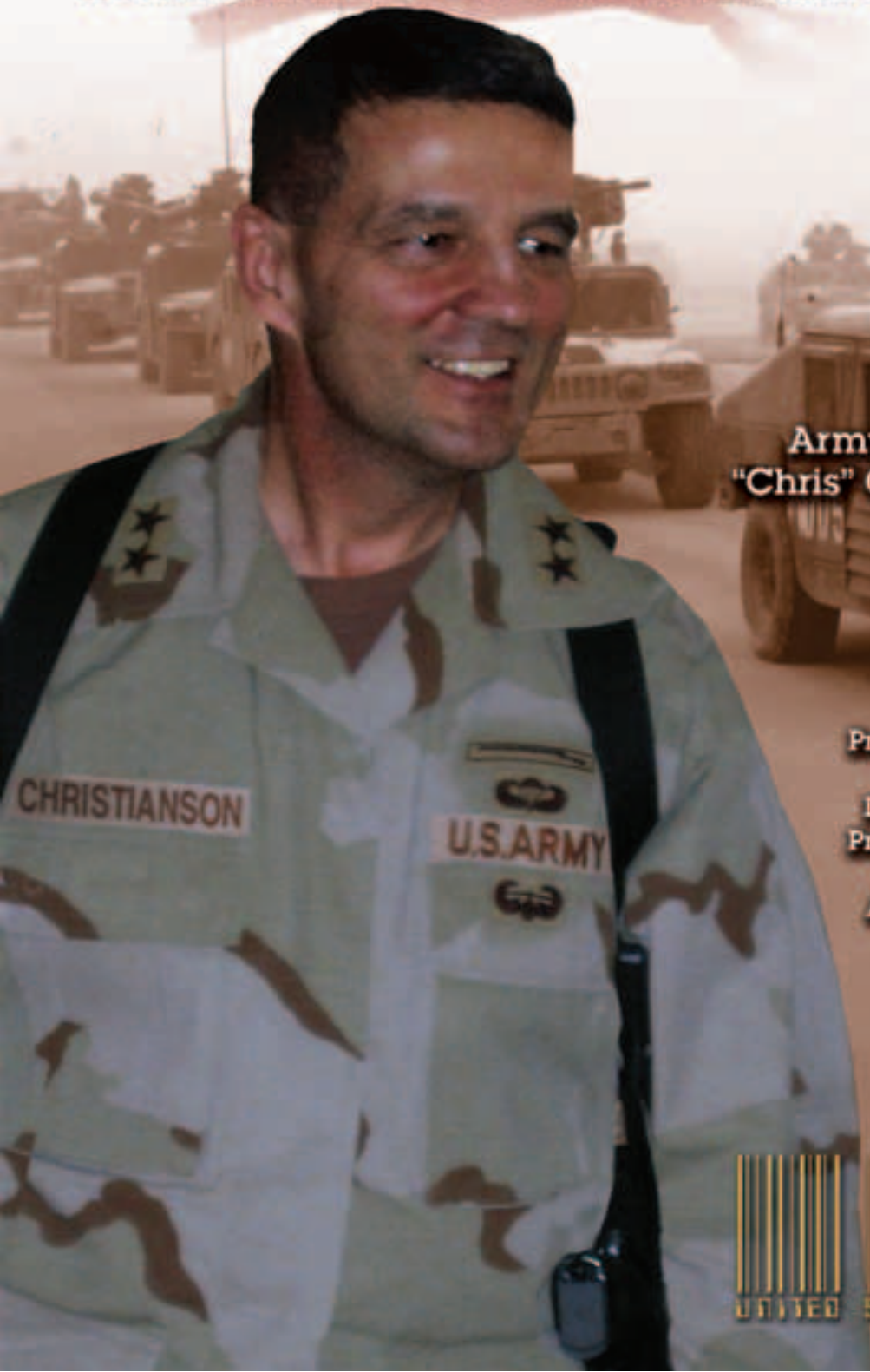

Achieving True Logistics Transformation

Army G4 Lt. Gen. Claude "Chris" Christianson talks to *Defense AT&L*

ALSO

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ALSO

DEPARTMENTS

Defense AT&L interviews

Army Lt. Gen. Claude V. "Chris" Christianson,

Deputy Chief of Staff for Logistics, G-4 Headquarters, Department of the Army

Army Lt. Gen. "Chris" Christianson served as the principal Operation Iraqi Freedom (OIF) logistics operator for the Coalition Forces Land Component Command headquartered in Kuwait, August 2002 through July 2003.

In March 2004, Christianson testified on the logistics readiness of the U.S. Army before the House Armed Services Committee Subcommittee on Readiness. The logistics achievement of OIF was, in Christianson's words, "especially spectacular in light of the fact that we supported a 21st century battlefield with a mid-20th century logistics structure."

In May, Randy Fowler, DAU director for logistics and sustainment, talked with Christianson for *Defense AT&L* about his experiences in OIF and the initiatives he is driving to enable logistics operations to keep pace with the rapid combat operations of the 21st century theaters in meeting the needs of the warfighter.

Q

Thank you for taking time to talk to Defense AT&L *Magazine today. In your testimony before Congress earlier this year, you said, "Today's battlefield is dispersed and consists of islands of operation that are connected by a fragile spider web of support." You went on to say, "The force must be flexible to respond to rapidly changing environments." How do you see the Army changing its logistics structure in support of these flexible demands on the future battlefield?*

A

The battlefield I talked about is best described as noncontiguous. Relatively secure islands are connected by lines of communication—air, ground, or sea, but in the case of Iraq, primarily ground and air—that we don't own. You read about RPG [rocket-propelled grenade] attacks along the routes, explosive devices that have been placed in the roads or in buildings alongside the roads, and here's the situation: you can drive down the road ten days in a row and it's safe, and then all of a sudden, on the 11th day, a bomb's been placed in there, so the route's not secure. That is, I think, the way the battlefield of the future is going to be. In order for us to live on the new battlefield, our system has to change from a layered system that's based on piles of supplies and internal lines of communication to a distribution-based system that allows us to be connected in ways that we haven't been connected before. We've got to be able to respond through a flexible distribution network that's world class. It's got to be 21st century and much like we see in the commercial world.

Q

Follow-on question to that. In the future, how do you see the Army providing combat service support to an expeditionary and a joint force?

A

Well, we have to do it in a way that, first of all, responds very rapidly. Upon initial entry into operations anywhere in the world, small sustainment elements have to go in to provide command and control [C2] from the very beginning. And that command and control then remains continuous as operations expand, or if it's over very fast, then we pull out. There's no gap in the command and control of support structure, so today we end up putting in layers. We put in a force, and then another force comes behind

Soldiers from the 319th Airborne Field Artillery Regiment rapidly deploy from their vehicle during a training exercise at Bashur Airfield in Northern Iraq.
DoD photograph by Army Pfc. Brandon Aird

Photographs courtesy Army Lt. Gen. "Chris" Christianson unless otherwise noted

them. Every time a new force comes in, we pass back the command responsibility for support. We tend to get it fragmented from the very beginning. In order to support very rapidly moving, rapidly changing expeditionary operations, our support structure's got to get in quickly, remain consistent, have the flexibility to grow or to shrink as a theater requires, all under single command and control. That's really the key—to be able to respond rapidly.

Q

I'm going to jump into an acquisition question. I would guess that there are certain capabilities and technologies that you and other operational leaders wish we had on the ground in Operation Iraqi Freedom [OIF] to provide better logistics support to the combatants. We hear that the warfighter is often frustrated with the inability of our acquisition process to get the right stuff into the battlespace fast enough. In fact, Congress criticized DoD recently for not getting up-armored HMMWVs [high mobility multipurpose wheeled vehicles] gun trucks there fast enough. Could you talk about the logistics initiatives we're pursuing in the CSS [combat service support] community, maybe via spiral development strategies, to speed up the process?

A

Well, the most important capability we'd like to have had was the ability to communicate requirements—logistics requirements—all across the battlefield. In the current construct, we require forces to be in place for a while before you can get all the communications architecture in because it depends on a structure that's pretty rigid and relatively complex. Our plan was to go in and try to provide non-line-of-sight satellite-based communications to our forward logistics elements to enable them to provide their requirements to the supporting base in real time, without having to depend on a very, very large and cumbersome infrastructure. We didn't have that when we first started, but the ability to go out rapidly, identify the requirement, put together a package, test it to make sure it worked, and get into the theater, allowed us to get it there within a month of crossing the LD [line of demarcation]. So once organizations like the 101st [Airborne Division (Air Assault), Fort Campbell, Ky.] or the 4ID [4th Infantry Division (Mechanized), Fort Hood, Texas] got there, we were able to pick up this satellite-based communications capability and we're now able to pass the requirements off the battlefield.

Army Lt. Gen (then Maj. Gen.) "Chris" Christianson (left) and Army Lt. Col. Willie Williams at the 26th Forward Support Battalion, 3rd Infantry Division operating location at Baghdad International Airport, May 2003.

"Our logistics professionals' achievements in OIF were especially spectacular in light of the fact that we support a 21st century battlefield with a mid-20th century logistics structure."

Christianson Congressional Testimony

Since that time, we've equipped everybody in Iraq with that capability, and we're equipping the entire Army as we modularize. The process of acquiring that required us to first of all establish a network and get it certified by the communications guys and cleared by security folks. That's to make sure that the information we pass gets where it needs to go, that it's not going to get in the way of anything else, and that we've got some security on it. It takes a little bit of time to get all that stuff vetted and approved. Other areas like up-armoring our HMMWVs—putting the add-on kits on them—really are pretty remarkable when you think about the time line. One of the issues we have with this particular case of protecting our soldiers, is the requirements' being identified at one level and rapidly escalating. You can play Monday-morning quarterback and say, "Why didn't we start this last April or May?" Well last April or May, the combatant commander requirements were at one level—relatively low.

In the case of up-armored HMMWVs, for instance, the first requirement was around 600 up-armored HMMWVs in a forward area. That number is now around 4,500. In addition, we have a requirement for over 8,000 HMMWVs to be armored—to put armor plating on the outside of them—plus the larger trucks that we're trying to armor up as well. So we're going from a requirement where we had a small percentage of the force with that kind of protection to now nearly all of the force having that same level of protection. Acquiring it and getting it out there for the soldiers takes a little more time than we'd all like. The armor kits were there, but they hadn't all been tested, so we RAM [reliability, availability, maintainability]-tested with the Army Research Labs, and as soon as they were verified to protect up to a 7.62 millimeter round and a certain level of explosive, then we okayed them, and we sent them over. So right now, I think we've got a couple of thousand of the 8,400 add-on kits over there, and about 75 percent have already been put on. We've got almost 50 percent of the 4,500 up-armored HMMWVs over there, and the production line, which was cranking along at a pretty low rate before this started, has now been raised and will be at almost 300 a month this summer. So the response of the industrial base and the response of the DoD itself in validating the requirements—it all takes longer than we would like.

What you want to have is exactly what the enterprise will bring us: single data entry, single point of entry, enterprise-wide visibility, and a shared partnership [with industry] and ownership in supporting the warfighter.

In some cases, we've had wonderful success in responding very rapidly. When he came on board, the chief of staff [Army Gen. Peter J. Schoomaker] quickly diverted some of the Army's monies into a rapid fielding initiative to provide the individual soldier critical items like the newest helmet, communication devices, better weapon systems, uniform items that allow them to fight better. Those we've been able to field very rapidly. We got them to some soldiers before they left for Iraq, and we've also gone into the theater and actually fielded those individual items onsite to soldiers over there. While I think we would all agree we'd like to have it happen overnight, that's just not possible, and I'm very comfortable that the Army has responded rapidly within its capabilities.

Christianson (second from left) and unidentified soldiers and officers in Iraq, June 2003.

Gun trucks is another issue where the requirements don't always get to the source rapidly. They've been building gun trucks over there since I left last July [2003] and the capacity to build those things back here was difficult—figuring out what the design is when you're not actually there. We wait for the combatant commanders to tell us what's needed. How do they want it to look? What do they want it to do? What capacities do they want? I think we responded pretty rapidly to that.

Q

This is an editorial comment: it sounds to me that given the complexity of operational changes and requirements generation, and given the need to test and energize the acquisition process and the industrial base, it's a complex process, and the process has responded pretty well.

A

Even so, there's absolutely no question we'd like to do it faster. In some cases, more money will allow us to do that; in other cases more money won't help in the near term. No matter how much money we spend, we can only make

Members of the 407 Expeditionary Communications Squadron put together a Flyaway KU Band Earth Terminal (FKET) Satellite System. The 407 ECS is deployed to Tallil Air Base, Iraq. U.S. Air Force photo by Airman 1st Class Desiree N. Palacios

so many up-armored HMMWVs a day until we either build another line, or increase the capacity of the factory, or find another producer. Those are the issues that we struggle with in every one of our areas, from individual soldier equipment, to armored protection for our vehicles, to new vehicles, to types and quantities of ammunition we buy. We're trying to break down some of those walls.

We're a little bit a victim of the last 10 or 12 years because since the end of Desert Storm and the fall of the Berlin Wall, we've been able to live, you might say, off the fat of the land. We haven't kept up industrial capacity in some of these areas. We've taken economic savings by reducing production in many areas, and now we have to turn some of this industrial capacity back on. We see it in everything from up-armored HMMWVs—for which we had a very small requirement, but now we have a very large requirement—to some repair parts. Before, we were able to turn around the repair parts and rebuild them; now the requirements are so large that the base we own doesn't have the capacity, and we have to go out to industry manufacturers, Sikorsky and Boeing and people like that. They haven't been making these parts for 10 or 12 years, and now we want them to make hundreds of them. In some cases we have lead times that stretch out to 12, 14, 18 months from the time we give money to a vendor or a civilian partner until they can turn on a line to actually produce the part.

Q

Is there an Army combat service support spiral development plan, and if so, what kinds of technology insertions are in the pipeline as a result of this plan?

A

Well there is one that's been formalized. We try to do this through our cycling program, particularly in aviation as we do product improvements with our aviation fleets. For example, you'll see aviation fleets that have come in and a Chinook helicopter that's coming out as a D model [CH-47D] with a lot of technology insertions. We're trying to formalize that now in our tactical wheeled vehicle fleet. We talked earlier about a distribution-based concept of support. That should tell us that the truck will be much more important tomorrow than it is today because we're increasingly reliant on that line of communication [LOC]. In the past, you could get away with piling layers of things into a forward area if the transportation system didn't work very well. You knew you had a big pile of stuff, so you could relax for a few days. Today, with this distribution-based system and the types of LOCs and how far apart these little islands are, the truck becomes critical.

So we've restructured our truck program, and we're putting together a tactical wheeled vehicle strategy specifying that in some kind of a cycle—say every 10 or 12 years—every vehicle will go through a refreshment program. It will be refurbished, at which time, we will inject into it technologies that will give us more capabilities than we had before. We have an Advanced Concept Technology Demonstration [ACTD] that will start next fiscal year, and we intend to bring all the players in industry who want to compete into what we'll call a "rodeo" with our current truck fleet. We'll take our vehicles, the HMMWVs, and our five-ton cargoes, and our PLS [palletized load system], and HEMMTs [heavy expanded mobility tactical trucks], and then we'll try to improve them in four specific areas: crew protection; network communications capability; lower, better maintainability; and lower consumption rates for fuel and so forth. For example, maybe there's an engine somewhere out there that would give a current truck more power, use less fuel, and be easier to maintain.

We want industry to bring technologies and capabilities to the table, and then our team will analyze them in light of those four major performance objectives and make decisions—we'll take this, this, and this, and put them into such-and-such truck. So then starting in FY06, when those trucks come through our reset and refurbishment program, they'll have the new capabilities. This is very, very important because the trucks we have today will be supporting the Army 20 to 25 years from now. The last thing you want 20 years down the road is a battlefield that's got network capability and a truck driving around that's not in the network. We can't afford to do that.

Q

I'm going to shift gears now to joint logistics as advocated in JV *[Joint Vision]* 2010, JV 2020 *and focused logistics. For several years, all the logistics transformation strategies that came out of the Pentagon put a huge emphasis*

The two most important things we have to do right now—get connectivity and create a distribution system that can respond rapidly.

on joint logistics and what you call "joint interdependencies." What are some of these key joint logistics interdependencies for the Army or for the joint warfighter?

A

Many of the interdependencies are unclear in most people's minds. I think that it's important to understand the operational framework in which we provide logistics support to a force. You really have three types of functions that are going on simultaneously in an operational area: independent, interoperable, and interdependent.

Let me give you an example to help define those three terms that are sometimes thrown around without a lot of thought. To replenish a combatant ship at sea while it's under way is an independent process, a Navy-specific task and function. But the function of replenishing that ship with food, for example, relies on some interoperabilities and some interdependencies. The Navy depends on the Defense Logistics Agency to procure the food, just like the Army depends on DLA to procure its operational rations. The Army orders its rations through the Army system. The Navy orders its rations through the Navy system. DLA can't have two different systems to order food. They have to be interoperable with the Services, which they are. In this particular, very simple function, you've got all three. You've got the independent Navy task of replenishing its ship, the interoperability with all the Services ordering the same stuff from DLA with Service-specific systems, and then the interdependency of all the Services on DLA to get the food. Now in this operational environment, they're all existing and they're all operating at the same time. So the questions are, what is "joint," what are the joint logistics tasks that have to be performed, and how do you execute them?

My view is that the first and most important thing is to come to an agreement across the joint community on what are the joint processes. I'll use medical as an example. Providing healthcare support to our servicemembers is probably—as most people would agree—a joint function. Now if you're down in an Army combat battalion at the forward edge of the battle, and you're doing resuscitative surgery with a forward surgical team, that's an Army task and an Army function. You don't see a lot of Air Force and Navy guys wandering around. But this whole process from end to end, from the time a person is injured—whether it be a soldier, airman, sailor, or Marine—to where the warfighter is finally well again and either home or back in the theater, that's joint. Though it may be an Army helicopter that takes a soldier or a Marine off a battlefield into an aerial port in Kuwait or wherever, it's an Air Force airplane that takes the warfighter to the hospital in Germany or all the way home. That whole process of providing healthcare and medical support is a joint process.

If we agree how the joint community works, we can then get into the process of making it work better. So that's the secret: agree on what the joint processes are, understand how they work, know the players and what their responsibilities are—because each Service and agency has roles and responsibilities that are hand-off points. Once that's done, we can work together to make it better. Then we can get to the ultimate point which is when someone says, "Well if you're going to do this task, I don't need to do it. I don't need to have force structure and resources behind it." But the thing to remember is that you are going to do it for the DoD, not just for your Service. Interdependency means you do it all the time for everybody.

Marines from 5th Marines mount TOW (tube-launched optically-tracked wire-guided) missile launchers on their HMMWVs as Delta Company 1st Light Armored Reconnaissance Battalion (part of the 1st Marine Division, Camp Pendleton, Calif.) drives to Northern Iraq during a sandstorm. DoD photograph by Marine Lance Cpl. Andrew P. Roufs

A soldier of the 101st Airborne Division (Air Assault) looks through the sights of a TOW (tube-launched optically-tracked wire-guided) missile launcher in Mosul, Iraq.
DoD photograph by Army Staff Sgt. William Armstrong

Q

You've answered my follow-up question, which was, what does joint logistics look like? I think you described that very well with the first example of resupplying a ship—what's tactical, what's operational, versus what's joint. Can you give us some information on the Deployment and Distribution Operations Center [DDOC] that's currently employed by CENTCOM [Central Command]. Is that the model for the future?

A

First of all, the Deployment and Distribution Operations Center that's in Kuwait is autonomous. It was an initiative started by Air Force Gen. [John W.] Handy [commander, U.S. Transportation Command, and commander, Air Mobility Command, Scott Air Force Base, Ill.] in his role as the distribution process owner for the Office of the Secretary of Defense. That organization was put there very specifically because it's at the interface between the strategic distribution system and the tactical/operational distribution system. It's the interface point where air and sea nodes hand things off from the strategic base into the operational area, and it's at that point of interface that we have a significant challenge.

The challenge is that our distribution systems weren't designed as a single system. You have lots of players—TRANSCOM, Air Mobility Command, Military Sealift Command, the Surface Distribution Deployment Command—plus you have all the organizations in the theater. You have the air components running the aerial port operations, and you have someone else running seaport operations. Then because of the large land operation, you have primarily the Army doing land distribution operations in the theater. All those players are part of the distribution process, but we never designed it as a holistic system from end to end.

This focal point of the distribution process in Kuwait is a critical point to concentrate effort in that they're there because of the criticality of the mission. So they come in with the skills and the tools to be able to reach back and see and control the distribution process from the strategic end and say, for instance, "No, I don't want that ship to leave at this time," or "I don't want that airplane to leave at that time," or "I want this load to go on that airplane." They must also reach down in and see what's going on in the operational area and then be able to take that information and coordinate and synchronize so that you have harmony between the two and avoid problems like having stuff pile up and not being able to get it forward, or having stuff back at the strategic base with no rearward movement coming out of there. So that's why they're there. It's the first step, really, in trying to build a joint logistics structure that really *is* an integrated process from the very end back here at the strategic base, all the way down to the foxhole, the airfield, the fighting platform in the operational area.

Q

This appears to be ad hoc in CENTCOM as set up by Gen. Handy as the distribution process owner. Is there intention to institutionalize something like this in future theaters?

A

It was sent in as a pilot program. It does replace an organization that currently exists in doctrine called the Joint Movement Center or JMC. The JMC would go away if this organization becomes formalized—and it will become formalized. The issue that we'll struggle with is that you don't need to have a 50- or 60-person organization in every combatant command because you don't have an operation going on in all of them. There's a thought that there would be a small planning cell with each combatant command. Then there would be a module that would come out of the strategic base if something happened in Korea, for example. This module would slide into Korea and provide those capabilities forward while the small cell would continue day to day to do the planning and preparation. That's what we're working through right now—what should the cell look like if we formalize it, how is it manned, and who provides the resources across the Services?

Q

We've made progress under OSD sponsorship for the joint distribution process owner. Where do we go next, either organizationally or operationally, with the joint supply chain process owner, who's even bigger than the distribution process owner?

A

First of all, I think OSD views Gen. Handy really as a supply chain owner, the process owner. OSD's definition of distribution is much more comprehensive than the dictionary definition, so they include the network of warehouses and distribution points and all that. Let me try and answer the question of where we go from here. If we go back to the earlier point I made about the processes, the issue is which processes we're concerned about. Every process should have an owner. If I use the medical health service—providing health service support to the joint force—as a process example, then who owns that process? My view is that we would decide on what processes support the joint force, designate an owner for each process, then map each process out to get everyone across the joint force to agree to how it works. Then we assign responsibilities to all the Services to do their part in the process and hold everybody accountable for performance. That's the way we have to approach it. After that's all done, we're going to find we need some kind of a control mechanism over the process or processes as they come together in theaters. And we'd end up with some kind of an overarching C2 structure that would allow us to operate effectively.

Q

The ugly question is always, do you end up with a joint logistics command?

A

But see, it's an ugly question because it's the *wrong* question. That needs to be the result of your work, not of your process. Not the driver. You see the problem is when you ask the question now, nobody will want to answer it. If you answer it, 60 percent of the people in the room will want to agree with you. The *right* question is this: what are the processes that our country needs in place to support the joint force? If we can't even get an agreement on the process and how it works, I don't care what kind of a command you put out there, the challenges are going to be the same tomorrow as they are today.

Q

I'd like to move into the area of C2 now, going back to focused logistics and all of the logistics strategic planning documents that have come out in recent years. Certainly, logistics situational awareness has been one area that we tried to improve, trying to catch up or parallel what's going on in operational situational awareness as we become effectively more net-centric on the battlefield. What are the latest thoughts or plans on movement to a joint C2 environment—progress either from an Army standpoint or a joint standpoint?

A

Well, first and most important is resourcing the Army over the next couple of years to be able to provide network connectivity to our logisticians—primarily the folks at supply nodes, the folks at hospitals, and the folks at our distribution centers—so that they're not dependent on anybody else to meet their requirements and to pass their data into the enterprise. We're doing that using commercial satellite technologies. All of that has been approved through the CIO [chief information officer] of the Army, and it's compatible with all the joint systems. Now the problem is that in the joint environment, there is no such vision for connecting logisticians—although I believe that when Gen. Handy maps his distribution processes, he's going to put an information architecture on top of it that's going to require a network connectivity. It will be based pretty much on what I'm talking about here, some kind of a commercial satellite network that we can use. So what we're really talking about isn't an operational network where you command and control forces for operations. It's a business process or a sustainment network that we can use to pass sustainment data around the enterprise and control the things that are critical to supporting the forces as they conduct operations. That's what we're doing, and we're doing it in concert with the Army as it modularizes over the next few years. We're going to use that same construct and will carry it into the joint community as we define these processes.

The Air Force already has that kind of capability. When they go forward in the air fields using their expeditionary operations concept, they bring non-line-of-sight satellite-based communications with them, both classified and unclassified. The Marines tactically don't have any of that at all, so we're trying to share what we're doing with the Marine units in Iraq so we can get the same kind of capabilities across the battlefield. The key is to build this

Supplies are sling loaded under a CH-47 "Chinook" helicopter.
U.S. Army photograph by Spc. Patrick Tharpe

Aerial view, including runway, terminal, hangar, and tent city, looking south of Kandahar Airfield, Afghanistan.
Photograph by Marshall W. Woods

sustainment process network so that the requirements can get out on the battlefield in real time.

The situational awareness that you mentioned is really our ability to sense what's going on in real time on the battlefield. In the past, our approach was to say, "Every five days we're going to give you this box of stuff. We don't know if you're using everything in the box we gave you five days ago, but we're going to give it to you anyway *because* we don't know what you're using." The ability to sense and then respond to the requirements is the key. If you don't know what they need, no matter how good your system is, you're only guessing. We do very well with water and food and fuel because those are pretty finite. Take fuel. If you can do the math and you've got the number of trucks right and you know how far they're going to be driving, you'll be 85 to 90 percent on the money with the fuel requirements. So every three days, you send three days' worth of fuel. Doesn't work that way for repair parts. Doesn't work that way for ammunition consumption. Those requirements we have to be able to see in real time so we can respond.

Q

Now this is kind of a continuation about seeing requirements and seeing assets, and it deals with RFID [radio frequency identification data]. I was surprised to read in a publication last week that RFID's expected to be a $20 billion dollar business with Wal-Mart and DoD leading the way. How did the RFID applications perform in OIF?

A

Very well, for the most part. The problems we had with RFID in total asset visibility go back to what we've talked about several times, and that is the process. RFID is not a process. AIT [automated identification technology] is only a technology. Everyone needs to be asking, "Who owns this? What process is it enabling? What value-added does it have compared to what I have to do?"

Therein lies the crux of our problem because we had good luck with RFID applied here at places like the Defense Distribution Center in Susquehanna [Pa.], where we containerized and consolidated our cargo and prepared it for movement overseas. They had it as one of their performance metrics to put RFID on all of their containers and their pallets. For the most part, that was at 95 percent level of resolution. It came in. You could see it coming into the theater. Once it gets into the theater, you're trying to put it up into a tactical battlespace. The question is, who's got RFID up there? Whose job is it to instrument this battlespace? We instrumented it, but we instrumented from the CFLCC [coalition forces land component commander] level. It wasn't part of anyone down in the force saying, "That's my job, so when I get to this place I'll put up an antenna so I can see everything that goes by here."

That hasn't been done yet because the process hasn't been clearly identified. For example, if RFID is the technology that's going to be used to provide in-transit visibility [ITV] across the OSD and the joint force distribution system process, then Gen. Handy's folks—when they describe this process—have to instrument the process. Say I want to know what's going on at a particular place on the ground. Well who owns that place? If it's a Navy place, then the Navy needs to have the responsibility to resource it. Right now you won't find that. You won't find anyone who understands it's a case of "If I do this task in the distribution process, I am responsible to Gen. Handy or to the joint community to send them this data. I have performance standards I'm supposed to adhere to. If I don't meet them, it's going to come up on the screen and say, 'Hey, you're not doing your job.'" Right now none of that is in place. The technology is world class. What we haven't figured out yet is exactly what are we using it to enable.

Q

New technology almost always produces growing pains. I heard an Army general briefing on RFID, and he passed along this anecdote: as soon as a lot of containers got into theater, the first thing that the soldiers did was rip the transmitters off and throw them in trashcans because they didn't know what they were. They thought it could have been some kind of enemy sensor or other threat. Another story the general told was that as the convoys were actually moving north there, because of the things that operationally happened in the combat zone, they were being diverted from where the interrogators are that pick up the signals for the real in-transit visibility going into battlespace. Are there continuing operational challenges in effectively implementing

Lt. Gen. Claude V. "Chris" Christianson

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Lt. Gen. Christianson, a distinguished military graduate of the Army ROTC program at North Dakota State University, was commissioned as an ordnance officer in 1971. From 1971 to 1974, Christianson was assigned to the 1st Infantry Division, Fort Riley, Kan., first as weapons platoon leader, then executive officer in the 1st Battalion, 18th Infantry, and later as a shop officer and the S2/3 (operations officer) in the 701st Maintenance Battalion. He was assigned to Thailand in 1974 for two years, where he served as the chief of shop operations with the United States Army Support Group in Samae San and later as a customs officer with the JUSMAG-THAI in Bangkok.

From 1977 to1979, Christianson was assigned to the 9th Infantry Division, Fort Lewis, Wash., as the commander of a forward support maintenance company in the 709th Maintenance Battalion and later as the operations officer in the Division Support Command.

From 1979 to1982, Christianson was an assistant professor of military science at Colorado State University. From 1983 to 1986 he served as the Army Guard maintenance programs and policy officer with the National Guard Bureau, Washington, D.C. In 1986, he was assigned to the Southern European Task Force in Vicenza, Italy, where he served three years as the director of logistics for the 22nd Area Support Group. From 1989 to 1991, Christianson commanded the 725th Main Support Battalion, 25th Infantry Division (Light), Schofield Barracks, Hawaii. In 1992, after completion of the Army War College, he returned to Hawaii as the assistant chief of staff G4, 25th Infantry Division (Light).

In 1993, Christianson was assigned as the chief of the office of defense cooperation (ODC) at the American Embassy, Rome, Italy, where he served for nearly two years. From 1995 to 1997, he commanded the 3rd, and later the 1st Infantry Division Support Commands in Kitzingen, Germany. After command, he was assigned as the G4 for the U.S. V Corps in Heidelberg, Germany. After his selection to brigadier general, Christianson was assigned as the deputy commanding general for the 21st Theater Support Command in Kaiserslautern, Germany, where he served from 1998 to 2000.

From 2000 to 2002, Christianson served as the assistant chief of staff, C4/J4/G4 United Nations Command/Combined Forces Command/United States Forces Korea/deputy commanding general (support), Eight United States Army, Republic of Korea. From August 2002 to July 2003 he assumed the duties of assistant deputy chief of staff, G-4, Headquarters Department of the Army with duty as chief, Logistics, Coalition Forces Land Component Command, Camp Arifjan, Kuwait in support of Operation Iraqi Freedom.

Christianson has a bachelor's degree in industrial engineering from North Dakota State University. His military education includes the Infantry Officer's Basic Course, Ordnance Officer's Advanced Course, the Armed Forces Staff College, and the Army War College. His awards include the Defense Superior Service Medal, Legion of Merit with Oak Leaf Cluster, Bronze Star Medal, Meritorious Service Medal with Silver Oak Leaf, Ranger Tab, Expert Infantryman's Badge, Parachutist Badge, Air Assault Badge, and Army General Staff Identification Badge.

RFID, or are those just part of the processes that have to be better figured out as application?

A

Well both are the result of what I said before: nobody owns the processes, and they're not understood. People who are involved don't have clear responsibilities. Take the first example—people are taking the tags off and throwing them away. I don't know who those people are, but if the guy taking the tags off was a supply person, he didn't understand and had not been trained to carry out those tasks. That's exactly my point. If you're a supply guy and you're at the end of the distribution chain, you are the Wal-Mart store, and I expect you to report. That means that you should have an antenna so when things come into your area, it automatically sends a signal. You don't have anything to do with it. You would have been trained to know that because when you send things backwards, like unserviceable components to be repaired, they should also have a RFID tag on them.

This is what I was telling you about. We put a technology in, but we did not enable a process. There's a big difference. If all I do is tell people to put RFID tags on everything and send it over, what value-added is it to the process if no one in the theater understands because no one has defined the process? Then the idea of things getting diverted around the battlefield—I mean that's going to hap-

pen all the time. The issue is, where do we want to see these things? Antennas, for example. Early on, we set up the first antennas just north of the border, up around Tallil airfield because that place was supposed to be a cargo transfer area. Those antennas, which were not expressly designed for 135- to140-degree heat and blowing sand, had a hard time staying operational. When they were operational, we could see anything that was tagged. Of course, everything wasn't tagged. You know, some things you see, some things you don't. What you heard in the briefing were symptoms of a problem. You didn't hear what the problem was and what was going to be done to solve it. I'm telling you that the problem is the result of not enabling a process with this technology, but just saying, "Here, go use our RFID."

Q

That was the Army general's ultimate point too. He got our attention with the anecdotes.

Let's turn to another important technology: ERP [enterprise resource planning] systems. All the Services agree that it's going to take enterprise systems in order to connect not just our information technology systems, but our processes and people and everything together—for an integrated sustainment network of the future. What is the Army doing to ensure that your ERP systems can interoperate with the Army and jointly?

A

The enterprise solution for the Army is being designed with an interface layer called product life cycle management plus [PLM+] that's going to be the master data manager for all of the Army data. It's going to provide all the interfaces for outside the enterprise, either somebody outside the enterprise who needs our information, or somebody who wants to give us information from outside. That layer will then be the filter, if you will, in the interface mechanism for everything on the outside and it will be compatible. It also serves to link our tactical ERP with our strategic ERP. Why don't we do just one? The reason we have two is because of the tactical level. We have some unique requirements to be able to operate in areas where SAP® ERP software and the business processes and the commercial world can't operate. They're not designed to unplug, go operate and fight a battle, come back, and plug in—kind of like a submarine being under for 30 days and then coming up in a matter of a few seconds, downloading all of this information, and going back under again. If you equate a tactical unit, particularly Marine and Army ground units, they have to have the capability to do that kind of an operation. At the tactical level, this PLM+ will serve to interface with our GCSS [global combat support system] Army program that's linked to the logistics modernization program as well as interface out. It's really like the master data repository and the manager for everybody. [***Editor's note**: SAP, referenced above, is a German company and a leader in providing collaborative business solutions. SAP has developed a Defense & Security solution that delivers information throughout the value chain (factory to foxhole) thus allowing maximum flexibility for changes in operational conditions and enabling use of the software in a tactical environment.*]

United States Army Vessel (USAV) Theatre Support Vessel (TSV-1X) Spearhead. The 98-meter USAV, with an average speed of 40+ knots, will transport troops and cargo.
U.S. Navy photograph by Photographer's Mate 1st Class Brien Aho

Q

I want to continue talking about supply chain management. How close do you think the Army is getting to an enterprise view of its supply chain that really can hook everything from vendors and national-level providers on the front end to the users on the back end?

A

Well, you know, that's a good question because there are many people that will tell you that you can't do that until you have the ideal enterprise software solution, until you've reached nirvana out there. My view is you can do it today. We *are* doing it today. We are entering into partnerships with industry to give them visibility of what we're selling at our "Wal-Mart stores." If industry can see what we're selling every day all across the Army, they can get involved as partners with us in determining how we should stock, when we should be manufacturing. Their business tools are much more powerful than ours. Let them be a part of this process instead of waiting for us and our management guys to figure out that we need to order a bunch of stuff from them. We're experimenting with this right now. I don't want to wait for nirvana because I'll be long retired. We can start to do it now with the tools we have.

The truck will be much more important tomorrow than it is today because we're increasingly reliant on that line of communication. The trucks we have today will be supporting the Army 20 to 25 years from now.

Marines with Weapons Company, 3rd Battalion, 8th Marine Air Contingency Marine Air Ground Task Force, Camp Lejeune, N.C., participate in an exercise in preparation for deployment to Iraq.
U.S. Marine Corps photograph by Cpl. Daniel Yarnall

Now it's not easy because part of the enterprise concept is that it's single data entry. The data never have to be manipulated through the enterprise. Once the information goes in, it populates everything that needs particular data elements, everybody can see it, and you don't have to play with it anymore. For example, we just sold a tank engine over in Iraq, and when our tank engine manufacturer back here in the strategic base sees that, he knows that he needs to send another one. He also knows that based on all the other tank engines we've sold, our demands are 30 percent higher than we anticipated. He can then turn around and start increasing his production without the Army even getting involved except to be a partner in knowing what's going on. We can do that today. The challenge for us is that he can't see those data today. We have to give them to him in a way he can use in his business systems. That means work for us. How do we do that? That's what we're working through now. We have the information. The requisitions in Iraq are reaching here in less than a day. So we just need to take that data file, and if you're a manufacturer for me and you produce 122 stock numbers, I should be able to dump that data to you in usable form.

That raises another question. If you're a big manufacturer, why should I go to you? If you're subcontracting to a guy who's rebuilding all these components, why don't I go directly to him? Now this gets to be a sensitive issue, but if you really believe in that, then maybe we should do it. There are advantages to letting the larger guys do that because they have the ability to do some things that the small guys can't do. You don't want the small guys to be involved in all this worldwide distribution stuff because normally they don't have the kind of tools to do it. So we'll pay a little more to get that kind of strategic level management and ability to flex. We're experimenting with several of our big guys—guys like Oshkosh, AM General, Stewart & Stevenson, United Defense, Sikorsky, Boeing, and so on—as well as working with DLA and even AAFES [Army, Air Force Exchange System], the PX [Post Exchange] system and the military clothing sales store. DLA can see what's being sold out of our stores. They can be a partner in replenishing the stocks instead of having to go through the AAFES system of ordering. In the long term, what you want to have is exactly what the enterprise will bring us: single data entry, single point of entry, enterprise-wide visibility, and a shared partnership and ownership in supporting the warfighter.

Q

This is my favorite quote from your congressional testimony: "Our logistics professionals' achievements in OIF were especially spectacular in light of the fact that we support a 21st century battlefield with a mid-20th century logistics structure." The issue is what's needed in the logistics domain so that we can catch up with the 21st century operational domain. I think we've talked about a lot of it already.

A

We have, and I'll try to summarize it again because I think you look at lessons learned from an operation like OIF or Desert Storm, and you see pages and pages and pages of logistics things that have to be fixed. There's a tendency in our business to put a little bit of water on each

of those fires. Some of them go out and get fixed, but most of them don't. They're still burning. If you were to read the lessons learned in Desert Storm and read the lessons emerging out of OIF, you'd see a lot of similarities. The question is, why? My view is that it happens because we aren't able to focus our efforts. What we are trying to do is focus our energy on four very simple objectives. We've talked about almost all of them today.

First, we've got to have a sustainment network across the battlefield that allows the requirements to get off the battlefield in real time so we don't have to guess or try to figure out what the forces need at any given time because we'll know. We'll know that a tank engine went out this morning.

Second, if we know that information, we have to be able to respond to it rapidly. We have to get the tank engine to where it needs to be right now. That requires us to have a theater distribution system that's world class, flexible, that responds rapidly, and is very precise. If the unit moves while the engine is en route, network connectivity can tell the truck to re-route. Those are probably the two most important things we have to do right now—get connectivity and create a distribution system that can respond rapidly.

Third, mostly in support of expeditionary operations, we have to change the way we view going into a theater. We have to be able to open theaters rapidly and receive forces very quickly and put them through to the operational area. Right now in the Army, we're working very hard to design an organization that's mission-focused on doing that, versus the way we do today—building the organization on the fly depending on the mission that we have. And fourth—we talked a lot about this—we've got to integrate the supply chain end to end. And we don't have to wait for the enterprise-wide solution to come on board with all the fancy software. We can do it now, and we have to do it. People like DLA and AMC and our industry partners have to see what we're selling. They've got to be partners, and when I say "partners," I mean that they have to have a sense of responsibility, and I believe they all do. If they know we depend on that, they're going to perform.

Q
My last question is in a lighter vein. Do you think it's true that amateurs talk about tactics and professionals talk about logistics?

A
I think that all tacticians become logisticians when they get up to a certain rank!

Q
Good answer. General Christianson, thank you.

Marine Corps Commandant Releases 2004 Version of *Concepts & Programs*

Marine Corps Commandant, General Michael W. Hagee has released the 2004 version of Concepts & Programs, *which describes major programs of the U.S. Marine Corps and how they support the ideas and concepts that are significantly enhancing the ability of the nation's naval expeditionary forces to project sustainable combat power in the 21st century.* Concepts & Programs, *available for downloading at* <***http://hqinet001.hqmc.usmc.mil/p&r/concepts/2004/TOC1.HTM***>, *also contains data that provide a snapshot of the Marine Corps organization, personnel, and resources. This information, Hagee said in a message published in the frontispiece of* Concepts & Programs, *"provides an important reminder of what it takes—along with an unwavering warrior ethos and devotion to duty—to create and maintain a successful fighting force."*

Acquisition Logistics in a Program Management World

Harry W. Bryan

We all know that the program manager (PM) has one of the best and worst jobs in the acquisition world. The PM whose team brings in the project on time, under budget, and performing as it's supposed to is a hero. Life is good. However, when the team is way over budget, the clock is still ticking, and no one can get even one line of software code to execute, then the words "execute" and "PM" might be used by the team in the same sentence.

The PM has a myriad of acquisition regulations, guidance, rules, regulations, handbooks, charters, and historical data to follow—or ignore at his or her peril. Contrary to popular belief, delivering a successful project is not a cookbook process; each program is different, requiring a different mix of ingredients. One of those very important ingredients is acquisition logistics. If acquisition logistics is not blended into the program when called for, the project is liable to fall flat and not rise to success.

Pay Now or Pay Later

What is acquisition logistics—acq log? Correctly analyzed, determined, and performed, acq log is a cost-effective approach to supporting equipment throughout its entire life cycle while meeting user requirements.

Unfortunately, most PMs don't see it that way. Acquisition logistics is too

Acquisition logistics is too often viewed as an expensive accoutrement to the program requirements (hardware, software, and so forth).

Bryan *is director of acquisition logistics at the Program Executive Office Simulation, Training & Instrumentation, Orlando, Fla. He holds a master's degree in logistics management from Florida Institute of Technology.*

often viewed as an expensive accoutrement to the program requirements (hardware, software, and so forth). Logistics products are typically considered nice to have but expendable, especially if the program is short of money. This is a dangerous and expensive way to think. Remember the car mechanic in the motor oil TV commercial: "You can pay me now, or you can pay me later"? It's the same thing with acquisition logistics. If the PM doesn't make the necessary investment up front obtaining the required products, the program will eventually pay the price in terms of nonsupportability.

Acquisition logistics, formerly known as integrated logistics support, comprises functional processes (configuration management, facilities, maintenance planning, manpower and personnel, training, packaging, handling, storage, transportation, supply support, support equipment, and technical data); design interface elements (environmental/hazard materials, human systems integration, quality assurance, reliability, maintainability and availability, risk management, safety, standardization, and survivability); and other considerations (direct vendor delivery, outsourcing, and total ownership cost). These products are defined and determined at program initiation, and their development continues throughout the acquisition process. Would a savvy PM really want to ignore these ingredients?

The acquisition logistics functional processes are also referred to as the components of operational support—that is, supportability. It should be obvious, looking at the many elements of supportability, why it accounts for between 65 and 75 percent of most systems' budgets. This fact alone scares many PMs and causes them to decide (often at program peril) that program dollars will be saved by heroically cutting out these niceties. Wrong!

And what about total ownership cost (TOC)? TOC is all the costs associated with an asset's life cycle, plus the cost of the supporting infrastructure. TOC encompasses research, development, acquisition, maintenance, warehousing, inventory (spares), operations and support (O&S), deactivation, and disposal. O&S—supportability—costs account for the lion's share of a system's budget; estimates are in the 70 to 75 percent range. Given all of that, why is acquisition logistics so critical to the success of a program? Simply put, it's critical because if it's correctly developed and executed, it will reduce TOC.

Dump and Run

Then what's the problem? If we know what makes a program successful in terms of cost, schedule, performance, and supportability, why are so many programs in trouble as a result of cost overruns, longer schedules, and/or performance set-backs? Why are there so many drive-by fieldings performed (systems are developed and then just dumped on the user without a support package)? Why do PMs seemingly permit problems to develop and flourish?

It's easier for most PMs to meet cost, schedule, and performance (C-S-P) requirements as best they can, then dump the system and run. Let the sustainment folks worry about how they will find spares or tools and test equipment to fix (by then) antiquated equipment. Who needs to be trained to operate the system? That's what the contractor logistics support staff is paid to do, right? The contractors say they can do the work, so let them prove themselves. Buy a technical data package? Who reads it? Who would ever want drawings? So what if the original equipment manufacturer (OEM) goes out of business? If need be, the sustainment group can pay to have reverse engineering performed—it can't cost that much, and besides, who cares? Not my problem right now. I've got a system to get out the door.

So goes the thinking, and therein is the problem. Too often, PMs are concerned only with here and now and what's directly ahead—just like working on an assembly line. Build it, deploy it, and then on to the next project. This must not be allowed to continue to happen.

Reducing TOC

The PM who cares about total program success already realizes that acquisition logistics is critical and that one of its initiatives, performance-based logistics (PBL), will help reduce total ownership cost. PBL is a performance-based acquisition strategy versus a traditional transaction-based approach. Instead of buying quantities of spares, repairs, and so on, PBL buys a predetermined level of system performance to meet the warfighter's objectives. Ideally, PMs work with users to develop and implement PBL agreements that then allow the contractor to offer cost-effective and innovative solutions to meet PM and user requirements (a far cry from the days of rigid military standards and specifications requirements). This is a very practical way to reduce TOC—through mutual assessment of requirements and solution determination.

Holding PMs Accountable

PMs will never get it right until they understand the importance of reducing TOC and until the Department of Defense (DoD) holds them accountable. PMs are typically concerned only with staying within budget, meeting the schedule, and delivering the performance agreed upon by the intended user—or in other words, establishing "program goals" per DoDD 5000.1. Yes, the assistant secretary of the Army for acquisition, logistics and technology decreed in 2000 that supportability was of equal importance to cost, schedule, and performance. Reality is that many PMs see dollar signs instead of the benefits of supportability, and when a program is in trouble, the easiest fix seems to be cutting logistics products, which in turn will reduce (if not eliminate) supportability.

PMs will never get it right until they understand the importance of reducing TOC and until the Department of Defense holds them accountable.

All the C-S-P integrated process teams, all the partnering and teaming with the contractor, and all of Defense Acquisition Workforce Improvement Act Level III program management certifications in the world won't ensure that a successful program is developed and deployed unless acquisition logistics is taken seriously, and its precepts are adequately and efficiently applied.

At the very least, cost, schedule, performance, and supportability should be equally weighted. A public report card should be published on each program detailing the "grades" the PM receives in these areas at designated reporting periods. The PM has to meet each of these four parameters before a system's delivery is termed successful. We're always hearing how DoD spends approximately 75 percent of a system's cost in sustainment. If we want that number to drop, then we should change the way we grade supportability as an intricate part of system delivery. What do we have to lose? Status quo isn't working. Change comes only when a metric has to be met.

When are we, the entire project team (but especially the PM), going to change our rigid C-S-P mindset and realize that by trying to cut corners and save program dollars, we're wasting many more resources over the life of the program because we're not utilizing acquisition logistics as we should? When is DoD going to realize that the success of the entire program should rest squarely on the PM, and the PM "report card" should reflect performance in obtaining TOC reductions over the system's life cycle?

Editor's note: The author welcomes questions or comments. Contact him at harry.bryan@peostri.army.mil.

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Flexible Contracting Approach: Mitigating the Challenges of Technology Maturation

Anthony Pezzano and Peter Burke

Responding to a transforming Army, project and product managers (PMs) must be able to transition programs from the technology base into the acquisition system with an approach that maximizes flexibility and reduces risk. The transition period encompasses critical program events to include solidification and approval of requirements and completion of technology readiness activities prior to Milestone B. During this period, PMs face the dilemma of trying to verify system readiness efficiently while at the same time working toward addressing requirements.

This article examines a common occurrence: a technology base program preparing for transition into the acquisition system, but still needing to demonstrate an acceptable technology readiness level (TRL)—in other words, the program's "technical report card" requires improvement.

During this period, the PM is typically completing the requirements process, which primarily includes completion of an analysis of alternatives, and briefing the requirements through the Service and DoD requirements oversight process. In addition, the PM is briefing the Army leadership to solidify the program's spiral and/or incremental development strategies. Also, the PM may be completing efforts to increase the TRL of an item's major subsystems to an acceptable state. Often, however, available research, development, test, and evaluation (RDTE) funds are limited prior to system demonstration and development. Therefore, completing TRL improvements must be accomplished as efficiently and economically as possible, and must utilize maximum contracting flexibility. Because of the likely need to address changes in the requirements, it may be very difficult to write a specific statement of work during this period.

The Office of the Product Manager for Mortar Systems (PM Mortars) was faced with the dilemma described above during its efforts to complete critical activities during the component advanced development (CAD) phase of the precision guided mortar munition (PGMM) program. Working with the contracting officer, the PM established a task order contract with a ceiling price to complete CAD program efforts. The task order contract statement of work (SOW) included a "blanket" description of capabilities required for the tasks to be completed throughout the duration of the contract's period of performance.

Pezzano *is the senior systems engineer for the Precision Effects Branch in the Office of the Product Manager for Mortar Systems, PEO Ammunition.* **Burke** *is the chief of the Precision Effects Branch in the Office of the Product Manager for Mortar Systems, PEO Ammunition. Both are members of the Army Acquisition Corps.*

The principal advantage of this approach was that it permitted the government to pursue multiple tasks in parallel with contractor teams. It also allowed for quick reaction time to address changing requirements, both technically and programmatically. In this case, both the combat developer and milestone decision authority (MDA) desired that certain tasks (which included software security, performance enhancement/maturation of component capabilities) be completed during this pre-systems readiness phase and work in conjunction with the ongoing analysis of alternatives (AoA). For example, the munition's warhead was required to be able to defeat personnel under protective cover. During the AoA, state-of-the-art modeling and simulation capabilities could not definitively determine if a warhead of this size and type could meet its requirements with an acceptable level of overmatch and a reasonable cost. A warhead testing task was, therefore, quickly scoped, scheduled, and negotiated by the government/contractor team using "alpha contracting" procedures. (Alpha contracting is a technique that uses a team approach to prepare, evaluate, and award proposals in substantially less time than the traditional approach. The Alpha technique involves the contractor, Defense Contract Audit Agency (DCAA), Defense Contract Management Command (DCMC), program office staff, and the contracting and pricing personnel working together to develop, evaluate, and negotiate the contract in a more expeditious manner using parallel processes.) Within 30 days of initiation, the effort had been signed by the procuring contracting officer and was under way. The test was carried out and completed well before the program's Milestone B review, where this key component of system effectiveness was reviewed and accepted by the MDA.

Creativity is required to meet the unique needs of a program and make the most efficient use of our scarce research and development resources.

The fixed-price tasks, once established, were manageable and short in duration. This task order approach can be very useful when there is uncertainty regarding the program's budget. Flexibility and responsiveness become key positive features of this approach.

One interesting aspect of this approach involved the labor rates established on the base contract. Because of the uncertainty of the scope of the tasks that were to be performed, composite rates were negotiated up front with the proposed contractor that were slightly higher than a cross section of rates and labor categories typically found in most task contracts. This helped to reduce our industry partner's risk, given the initial uncertainty in the number and scope of tasks to be executed. However, the PM office believes that the composite rates did not cause the efforts to be any more costly than using the traditional cost plus type of contract. Composite rates eliminated the delays associated with negotiating a variety of different labor categories to perform a given task. The task was described and the proper mixes of personnel were established during alpha contracting meetings. The bottom line was a total cost to perform the effort or deliver the product. The cost, once agreed upon, was firm-fixed price.

One negative aspect of this contracting method was the reluctance of the system contractor to perform a task-type contract that was more limited in scope than a traditional long-term cost reimbursement contract. The reluctance was probably most attributable to the uncertainty related to the time phasing and scope of future tasks.

The acquisition community must continue to develop innovative solutions that provide maximum flexibility at reasonable costs to the program office. Innovation and creative thinking are not exclusive to the design of products; they are also required for effective acquisition and contracting. Acquisition policy provides the acceptable guidelines and boundaries in which the PM community has to operate. However, creativity is required to meet the unique needs of a program and make the most efficient use of our scarce research and development resources.

Editor's note: The authors welcome comments and questions. Reach Pezzano at anthony.pezzano@us.army.mil and Burke at peter.j.burke@us.army.mil.

DAU South Spearheads Learning Organization Initiative

Jerry Davis and Keisha Vanleer

"We must think differently ... We must transform not only the capabilities at our disposal, but also the way we think, the way we train. ... There will be no moment at which the Department is 'transformed.' Rather, we are building a culture of continual transformation."

Donald H. Rumsfeld
Secretary of Defense
Transformation Planning Guidance, April 2003

DoD Photograph

Heeding Secretary Rumsfeld's call for continual transformation within the Department of Defense, Frank Anderson, Defense Acquisition University (DAU) president, assigned the learning organization prototype initiative to DAU South Region (DAU-S). The task was to facilitate an overarching learning strategy that promotes career-long learning and provides members of the workforce more control over their learning solutions. The initiative will be accomplished using the framework established by the seven goals of Michael Wynne, acting undersecretary of defense for acquisition, technology and logistics (USD AT&L).

Jim McCullough, dean DAU-S, quickly mobilized a team of faculty and staff to bring the prototype to life and assigned Jerry Davis, associate dean for outreach and performance support, to lead the effort. Within six months of the project start, the six major acquisition commands in Huntsville, Ala., had signed a memorandum of agreement with DAU forming the Huntsville Acquisition Learning Organization—HALO. Concurrently, another south region satellite team at Eglin Air Force Base, Fla., cooperatively formed the Eglin/DAU Cooperative Learning Organization (ELO).

Davis *is the associate dean for outreach and performance support, DAU, South Region. Previous positions include Director, Center for Strategy Analysis at the University of Texas, and experience as department head or professor at five universities.* **Vanleer** *is the outreach and performance support coordinator at DAU South with extensive experience in new initiative development.*

What is a Learning Organization?

In his book *The Fifth Discipline: The Art & Practice of the Learning Organization*, Peter M. Senge says a learning organization is "any organization in which you cannot *not* learn because learning is so insinuated into the fabric of life."

To understand the challenges in forming a learning organization with several independent and separate commands, one has first to understand the concept of learning organizations. Davis, lead facilitator of the prototype learning organization, relied on Senge's book.

The goal of a learning organization is to make learning part of the everyday office environment. A successful learning organization focuses on five goals:

Photographs by Don Clark, DAU-S information technology manager, unless otherwise noted

The goal of a learning organization is to make learning part of the everyday office environment.

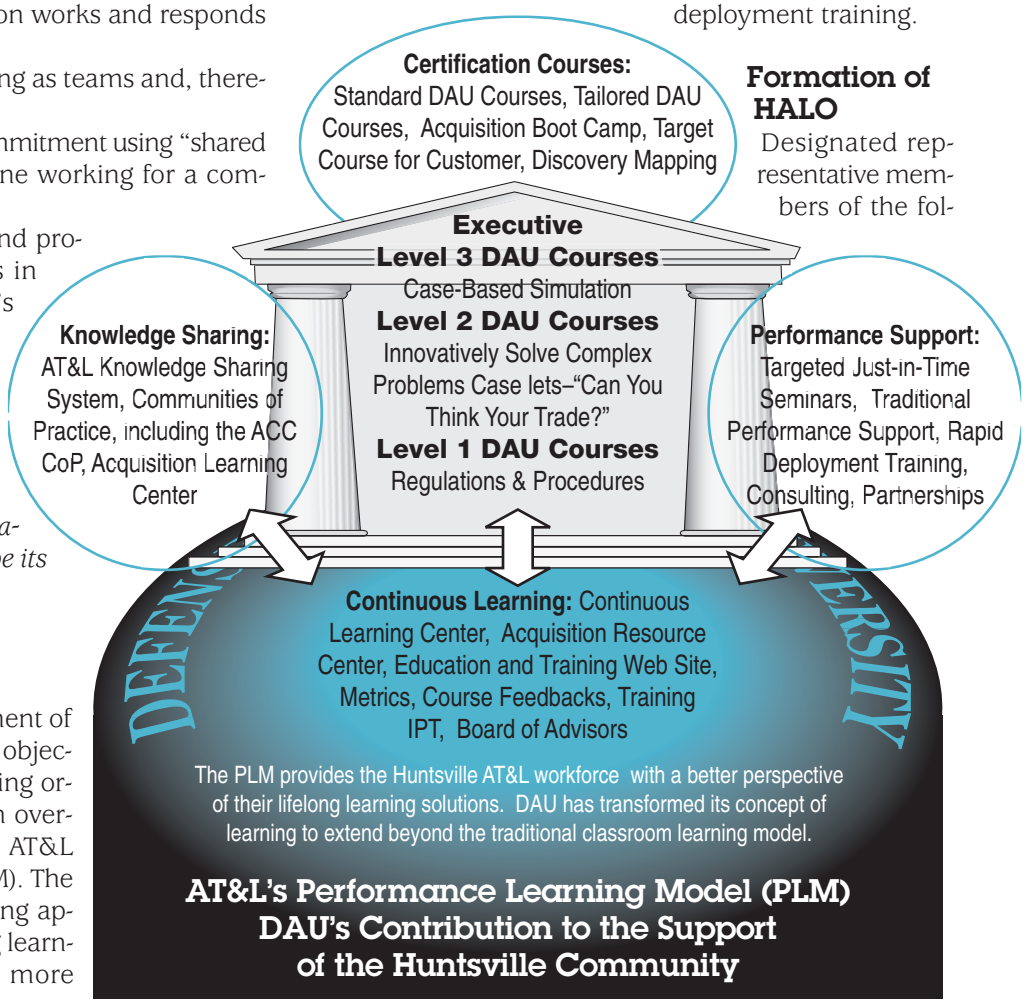
Jim McCullough, dean of DAU-S (left), signs the memorandum of agreement with Paul Bogosian, deputy program executive officer Aviation, and Maxine Maples Kilgore, director, Acquisition Support Center, Southern and Western Regions, establishing the Huntsville Acquisition Learning Organization. Additional Huntsville acquisition commands signed in a separate ceremony.

- **Systems Thinking**—Integrating all the functions in an organization into a cohesive structure.
- **Mental Modes**—Internalized frameworks and generalizations of how an organization works and responds to its environment.
- **Team Learning**—People working as teams and, therefore, learning as teams.
- **Shared Vision**—Developing commitment using "shared pictures of the future"; everyone working for a common, agreed upon future.
- **Personal Mastery**—Personal and professional development that is in sync with the organization's goals.

The bottom-line definition of a learning organization is that it's *any organization that has a culture and structure that promotes learning at all levels to enhance its capabilities to produce, adapt, and shape its future*.

Why Form a Learning Organization?

USD AT&L Goal 7 is the development of a motivated, agile workforce. An objective of Goal 7 is to facilitate learning organizations by fully deploying an overarching learning strategy—the AT&L Performance Learning Model (PLM). The PLM is a capabilities-based training approach that promotes career-long learning and provides the workforce more control over their learning solutions through balancing training courses, knowledge sharing, continuous learning, performance support, and rapid deployment training.

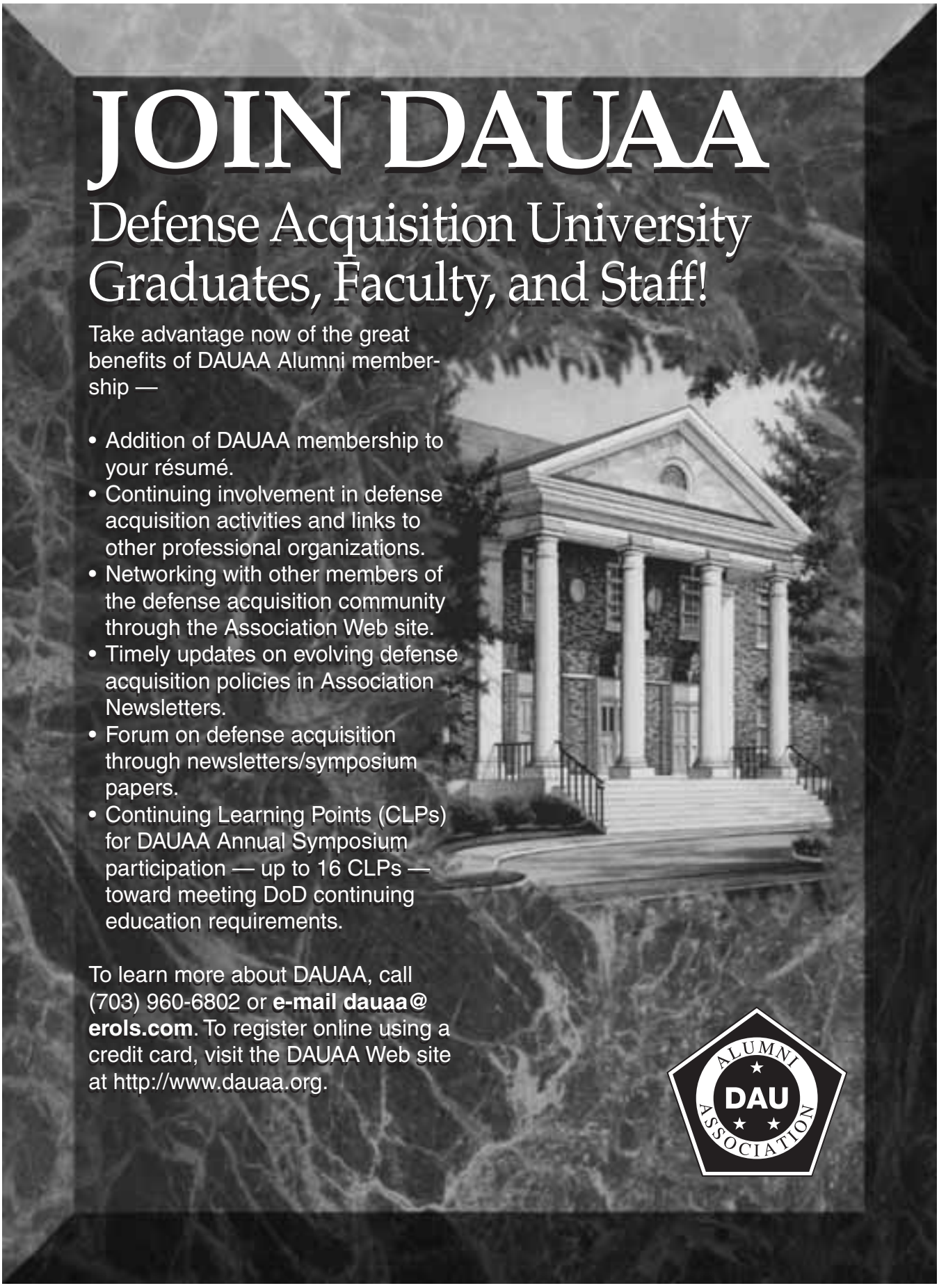


The PLM provides the Huntsville AT&L workforce with a better perspective of their lifelong learning solutions. DAU has transformed its concept of learning to extend beyond the traditional classroom learning model.

AT&L's Performance Learning Model (PLM)
DAU's Contribution to the Support of the Huntsville Community

Formation of HALO

Designated representative members of the fol-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A learning organization is any organization that has a culture and structure that promotes learning at all levels to enhance its capabilities to produce, adapt, and shape its future.

Jerry Davis, associate dean for outreach and performance support (left), and Keisha Vanleer, DAU-S outreach and performance support coordinator, congratulate Don Barker, deputy program executive officer Tactical Missiles, after the memorandum of agreement signing ceremony in which PEO Tactical Missiles strategically aligned with the Huntsville Acquisition Learning Organization.

lowing formed a working integrated product team (WIPT): the Army Acquisition Support Center; Ground Based Midcourse Defense; Program Executive Office Tactical Missiles; Program Executive Office Aviation; U.S. Army Aviation and Missile Command; Program Executive Office Air, Space and Missile Defense; and U.S. Army Space and Missile Defense. The initial WIPT meeting, facilitated by DAU-S in September 2003, approved the prototype concept of a learning organization and pledged support. Follow-on meetings resulted in the development of the HALO goals and objectives and a memorandum of agreement.

Formation of Eglin Learning Organization

October 2003 marked the official opening of the DAU South satellite campus at Eglin Air Force Base. Jack Dwyer, site manger, immediately began work on forming a learning organization. The learning organization initiative was facilitated by DAU's close ties to the newly formed Air Armament Academy at the Air Armament Center (AAC). The evolution of the Eglin learning organization (ELO) is described in the companion article on page 26 in "A Learning Transformation: The Eglin Learning Organization."

Path Ahead for Learning Organizations

The formation of HALO and ELO is just the beginning of the exciting initiatives. Future activities include sharing lessons learned, collaborating as subject matter experts, participating in rotational assignments, and a regional learning organization conference. Additional information on HALO may be found at <http://www.dau.mil/regions/South/halo.asp>.

Editor's note: The authors welcome comments and questions. Davis can be contacted at jerry.davis@dau.mil and Vanleer at keisha.vanleer@dau.mil.

A Learning Transformation: The Eglin Learning Organization

Jack Dwyer

"The dynamic business environment of the 21st century demands that we employ innovative training methods."

Maj. Gen. Robert W. Chedister, USAF

The words "learning organization" are more than just buzz words at Eglin Air Force Base, Fla. They are becoming a way of life for Air Force members at Eglin's Air Armament Center (AAC). Air Force Maj. Gen. Robert W. Chedister, AAC commander, is leading the charge. Chedister is focused on transforming AAC into a learning organization—a place where people at all organizational levels, individually and collectively, are continually increasing their capacity to produce results.

AAC, the Air Force's primary weapons and munitions product center, is firmly committed to delivering world-class munitions and weapons to the warfighter. Its products address a wide spectrum of combatant commander needs, from precision guided bombs and air-to-air missiles, to mobile shelters for troops, and B-2 bombers. AAC and its associate units share the largest personnel deployment tasking of any Air Force base.

Based on his experiences as a test pilot, program manager, commander, and program executive officer, Chedister set out to capture and share Eglin's collective learning assets—both the know-how and know-why. "The dynamic business environment of the 21st century demands that we employ innovative training methods," Chedister says. He and his Eglin leadership team set out to ensure that "the AAC workforce can make smart business decisions, deliver superior products, and provide agile combat support to the warfighter."

Becoming a Learning Organization

In his Jan. 5, 2004, *Here's the Deal* e-newsletter, Chedister writes: "We will become a learning organization, fit to fight, and horizontally integrated with our brothers and sisters throughout the command, the Air Force, and other Services." Chedister believes his learning organization will provide an environment and opportunities to experiment with new system development approaches, learn from one's own experiences and those of others, and share knowledge quickly throughout AAC.

Chedister has three strategic learning organization objectives: (1) create and enable the workforce; (2) establish a culture of transformation; and (3) maintain combat-ready forces. These objectives support the following Air Force Materiel Command (AFMC)/AAC goals: (1) develop an expeditionary mindset and culture; (2) be a valued warfighting partner; (3) assure warfighting technological dominance; and (4) be the workplace of choice. To foster the learning organization development, Chedister established the Air Armament Academy, also known as "A cubed," or simply "A^3."

While Joint Surveillance Target Attack Radar System (JSTARS) program director at Hanscom AFB, Mass., Chedister had established the JSTARS University to enhance members' skills and knowledge. JSTARS University contributed to his program office's repeat selection as the Air Force's best system program office. After assuming command of

Dwyer *is site manager at the DAU-South satellite campus at Eglin AFB. He holds a doctorate in adult and continuing education from Virginia Tech.*

AAC, Chedister studied results of the 2002 Chief of Staff Survey. AAC people felt the center could greatly improve the content and availability of local training. Enough said.

In April 2003, Chedister chartered the Air Armament Academy to provide "the right training to the right person at the right time." The A^3 mission is to "sharpen the minds for those who forge the sword." Each of Chedister's direct reports is an A^3 faculty member, teaching at least one class per quarter. A^3 training focuses on workforce knowledge gaps that AAC senior leaders directly identify as they execute their mission and programs. An additional benefit: the workforce and its leaders get to know each other better.

Since Chedister chartered the Air Armament Academy, he and other Eglin leaders have offered over 200 presentations to more than 3,000 Eglin personnel. The first class offered was "Agile Acquisition—The Transformation," an interactive half-day workshop developed under the direction of Marvin Sambur, assistant secretary of the Air Force (acquisition). There are now over 100 separate training classes in the current A^3 course catalog, which was developed using the DAU course catalog as a benchmark. Each A^3 course description includes clearly defined learning objectives and lists primary target audience and any prerequisites. Most classes are intended for a wide spectrum of AAC personnel, but several are specifically focused on highly technical aspects of the AAC mission and armament programs.

The AAC and Eglin AFB are on the road to becoming a learning organization where each member is a self-directed learner, and learning is part of everyone's daily activities.

New Training Policy

In June 2003, Chedister established a new center-wide training policy. Each month has designated training days when all are expected to attend training. Every other month contains a designated training week to facilitate longer-duration training such as multi-day munitions acquisition workshops. A^3 presentations are tailored to meet the individual needs of the Eglin workforce while supporting the AFMC and AAC strategic objectives and goals. One of the more popular classes is "The Feedback Process," taught by Chedister. Another is "Overview of Acquisition Business Practices," presented by Judy Stokley, AAC deputy for acquisition and former PEO for weapons.

Students register for classes through a Community of Practice Web site contained in the AFMC's "Knowledge Now" master site. Once enrolled, they receive immediate e-mail registration confirmation. One day prior to class, they receive automated messages reminding of their class event. After attending training events, they receive electronic confirmation of training completion. Completed training is recorded in an electronic individual development plan.

The Air Armament Academy project office is headed by Susan Willbanks. She and her three-person team receive overall direction from the AAC Executive Council. The office executes its charter through two teams: the curriculum board and project team and the A^3 project team. The curriculum board, composed of senior members from all Eglin's functional areas and organizations, is chaired by Bill Dyess, deputy director of the AAC Enterprise Program Office. The board determines core and elective hours and the training templates for each of the academy's colleges, of which there are currently four: science and technology; acquisition; fielding, test, operational training & evaluation; and installation sustainment & management.

Willbanks also leads the A^3 project team, composed of 17 individuals from AAC and associate

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If you are an expert on one or more topics and are willing to referee articles for the Defense Acquisition Review, e-mail norene.fagan-blanch@dau.mil.

units. The team meets biweekly to review project execution progress and to evaluate and integrate new tasks. Team members also review student and faculty feedback, course suggestions, and lessons learned.

A^3 and DAU

Before A^3 became operational, Chedister had a conversation with Frank Anderson, president of the DAU, about what type of collaborative working relationship A^3 and the DAU could have. Based on those discussions, it was decided to establish a DAU satellite office at Eglin that "would be joined at the hip with A^3." Thus, on Nov. 3, 2003, a memorandum of agreement was signed establishing the office with Jack Dwyer as the site manager. Thus, the two organizations work closely together to foster the AT&L Performance Learning Model and truly make AAC a learning organization.

Two of the principal tenets that underpin defense acquisition policy today are flexibility and innovation. Senior acquisition leaders want members of the workforce to be flexible in adapting to the program management situations they face daily, and innovative in continuously developing and implementing initiatives to streamline and improve the defense acquisition process. Thus, a working relationship and partnership of the DAU and A3 provides the workforce at Eglin a single portal for easy access to continuous learning opportunities, performance support, and information. To date, the DAU and A3 have worked together to provide the Eglin workforce tailored learning approaches and opportunities in meeting their personalized learning strategies.

The Eglin Learning Organization (ELO) team's AAC and DAU representatives facilitate the sharing of information and resources to promote and equip each individual's training portfolio. As such, training employs the AF KNOWLEDGE NOW (<https://afkm.wpafb.af.mil/>) and DAU (<www.dau.mil/>) Web sites, which highlight continuous learning modules, communities of practice, and knowledge sharing, and which are available online 24/7. "Training is the cornerstone of my plan to establish a true learning organization," says Chedister. "This transformation is well under way and is critical to our mission effectiveness."

According to Peter Senge, a principal architect of the learning organization concept, " the organization that will truly excel in the future will be the organization that will truly tap people's commitment and capacity to learn at all levels of an organization." Thus, learning has become part of one's daily activities at Eglin where everyone is becoming a self-directed learner.

Editor's note: The author welcomes comments and questions and can be contacted at dwyerj@eglin.af.mil.

Simulation & Modeling for Acquisition, Requirements, and Training—SMART

Does your program or project need assistance in implementing Simulation and Modeling for Acquisition, Requirements and Training—SMART? Army SMARTeam contact teams provide information, recommendations, and technical assistance to programs and projects about simulation support planning and implementing SMART. Contact team members discuss how to apply modeling and simulation (M&S) throughout the acquisition life cycle, including how to identify opportunities to reduce risk and costs and accelerate traditional acquisition processes. They share information about models and simulations that could be reused or adapted, as well as SMART lessons learned and best practices from other programs and projects. Contact team members also offer advice on simulation support planning, available M&S products and tools, simulation environments, and advanced collaborative environments. Army SMARTeam contact team customers include integrated concept teams, program and project managers.

For more information on contact team assistance, contact the SMARTeam project director: Leah Treppel/PEO STRI/DSN 970-3563/Leah.Treppel@peostri.army.mil.

For more information on SMART, log on to <http://www.amso.army.mil> or contact JamesWallace/AMSO/DSN6640262/james.wallace@hqda.army.mil.

Developing a "Best in Class" Business Process Management System

Keith B. Howe

With improved productivity becoming a benchmark for success in today's challenging economic environment, business process management (BPM) is a critical business function. BPM involves, among other things, finding ways to improve customer focus and satisfaction while eliminating unnecessary time, material, and effort. In the case of businesses like United Defense's Armament Systems Division (ASD), BPM also means generating the greatest possible return on investment (ROI) from every asset within the organization. These processes require the ability to create a high level of alignment with business objectives, as well as the seemingly contradictory ability to respond rapidly to changing circumstances.

The deployment of ASD's business process model has been accompanied by improved profitability, increased productivity, and a greater focus on customer service and satisfaction.

Change can be difficult, and ASD, an organization with roughly 2,000 employees located at four major sites and five smaller support sites, experienced first hand the struggles of creating and instituting a BPM system that employees could embrace and use. After several false starts over the past decade, the division finally developed the formula for success. The result has been extremely rewarding, and ASD is now experiencing operational improvements few employees would have imagined just a few years ago.

The deployment of ASD's business process model has been accompanied by improved profitability, increased productivity, and a greater focus on customer service and satisfaction. The management team has become more aligned and focused on attainment of critical customer objectives, and it demonstrates a dramatic ability to shift gears in response to newly emerging customer needs. The problems and successes United Defense experienced while creating its business process model provide valuable lessons for other organizations challenged with developing a more process-oriented business culture.

Howe *is vice president and general manager of United Defense's Armament Systems Division.*

The Emergence of ASD's "Top Down" Business Process Team

Significant business improvements are often driven by compelling operational needs. Before commencing ASD's BPM initiative, significant business issues were identified that constituted a critical need for change:

- Customer satisfaction problems were becoming increasingly evident, and at times, appeared difficult to resolve.
- Some segments of the business were not meeting profitability targets.
- Internal conflicts between departments, programs, and key personnel were increasing and showed evidence of poor definition of and alignment to overarching business objectives.

Leadership team discussions of the essential business processes were held to more clearly address the business deficiencies. These discussions revealed the need for improving the division's "business process understanding" in virtually all areas. The leadership team determined that the business—and particularly business processes—had become extraordinarily complex. Many new and emerging customer needs resulted in programs and operations that were difficult to understand, much less to effectively manage and measure.

The team decided to postpone a planned ASD reorganization in the near term and focus on the development of a process-based understanding of the business before tak-

ing any further action. This led to the establishment of the ASD top down business process team, which included both functional and program directors.

The mission of the top down business process team, which came to be known as the top down team (TDT) was to:

- Identify and define the division's key business processes
- Determine clear ownership of those processes, including definition, control, execution, and accountability
- Determine the interrelationships, boundaries, and handoffs between the processes.

Immediate Impacts of TDT's Efforts

As the TDT began dissecting the division's process problems, it began to generate both immediate and long-term positive impacts. One of the immediate impacts was changing the monthly operations review format to a new concept called the "execution excellence review" (EER). The new format was built on a distinctive, process-based measurement approach to operations and included customer "scorecards." This mandatory internal customer satisfaction reporting system put real teeth into the accountability of internal customer/supplier relationships. Directors had to identify the goods and services they needed from other internal suppliers in order to be successful in delivering their products and then rate those suppliers. If they rated suppliers as "satisfactory" and then failed to meet any objective, there was clearly no one to blame but themselves. This process initially led to a rash of "unsatisfactory" and "marginal" scorecard ratings—but it also led to a great deal of focus on fixing broken processes and communications, not just putting bandages on them.

After developing the EER review process, the TDT invited the local Defense Contract Management Agency (DCMA) to join its senior-level executive reviews and discussions and submit scorecards for its interactions with division suppliers.

As the EER process matured, TDT integrated the entire ISO 9001 quality management system review (QMSR) into it. This addition brought more focus on product and process quality as well as corrective and preventive actions. The method used to integrate the QMSR into the monthly EER didn't appreciably increase the time required for EER but certainly increased the focus on quality, customers, and measurability; at the same time, it eliminated the time required for QMSR at separate stand-alone meetings. The process had the added benefit of immediately reducing the amount of executive meeting time required.

Establishing ASD's Business Process Model

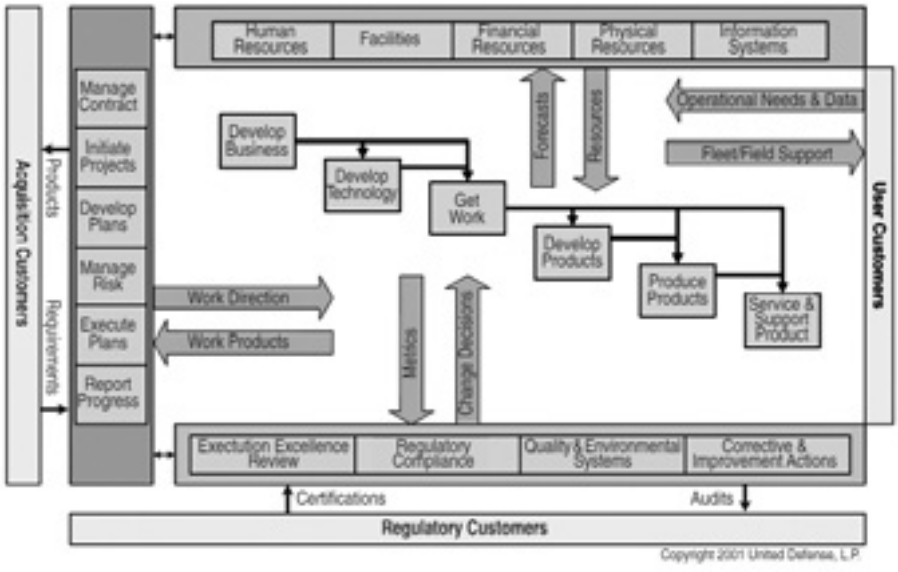
While the TDT was continuously refining the EER process, it was also establishing a new business process model (Figure 1), and the synergy between the two processes was inescapable. In order to avoid the pitfalls of previous efforts, the TDT developed a unique, hybrid process improvement approach. The approach uses some of the best practices evolved through various proven methodologies, such as Total Quality Management, Value Stream Mapping, Re-Engineering, Six Sigma, Baldridge, Lean, IDEF (Integrated Computer-Aided Manufacturing (ICAM) DEFinition), and others.

The United Defense model is different from all of these because ASD rejected the canned solutions approach and created a tailored process that used only best practices that clearly supported the business process model. The model is available to all employees on the ASD intranet home page. It incorporates numerous features to ensure simplicity, consistency and user friendliness, for example:

- A help menu, glossary, and built-in training modules
- Web page-style "drill down," where a simple click on a process feature opens the underlying process
- A drop-down menu on the left margin for faster access to lower-level processes
- Direct links to thousands of lower-level process and procedural documents.

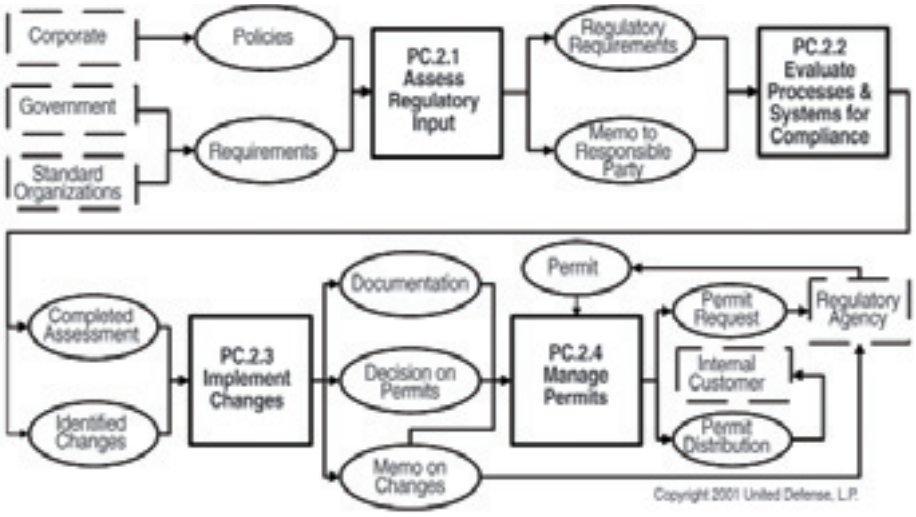
A key feature of the ASD business process model is the clear recognition that "customers" can be very different

FIGURE 1. **ASD Business Process Model.**



depending on where your process is identified in the model. For example "acquisition customers" are identified at the left edge; "regulatory customers" are identified at the bottom; "user customers" are on the extreme right edge; and "internal customers" are implicitly identified between each major process group. Each of these customers has clear inputs and outputs through defined interfaces in the model. Imposing this clarity of "who are your customers?" and "how do you satisfy their needs?" is critical in achieving process understanding and, more important, true customer satisfaction.

FIGURE 2. **Business Process Model Drill-down View: Manage Regulatory Compliance.**



An example of drilling down in the model is provided by looking at the level one "Manage Regulatory Compliance" process found at the bottom of the model. By simply clicking the process title, the next level process is revealed (Figure 2).

The process display technology used in the model is not revolutionary but composed of commercial off-the-shelf tools; but clearly, the process content, when correctly organized and linked with the right tools, is extraordinarily useful. This process content did not prove easy to develop, and the challenges in doing so are worth understanding.

Business Process Improvement Challenges

The challenges faced by the TDT can be broken into three broad categories: teams, tools, and techniques. Each of these areas poses special challenges and must be critically assessed and uniquely tailored to the environment in which it is expected to operate. If any of these critical change drivers is missing or misaligned with needs, program success is at risk.

Teams

The TDT included a small number of senior executives charged with defining the process vision. They needed to get the process experts at middle levels to not only accept the process vision, but also take the time to broaden it and sell it at the working levels. These mid-level managers were expected to build the teams at the next level, as well as lower levels, and to ensure the process vision was understood and communicated.

Since most managers simply did not have the time available to devote to extensive process development tasks, and many of them lacked the process development experience to address the project's needs, the TDT went in search of expert process consultants. The search focused on finding local resources willing to adopt the TDT's vision for ASD business processes and then supplement it with the necessary process skill and administrative support.

ASD hired Dashe & Thomson Inc., an experienced Minneapolis-based firm that provided capable and flexible support, especially in providing on-demand process analysts who interviewed and documented the "as is" process baseline required by the project. Dashe & Thomson maintained an on-site project lead and brought in additional resources as workloads required it.

The problems and successes United Defense experienced while creating its business process model provide valuable lessons for other organizations.

It is a common phenomenon that people resist change. This project was no exception. One of the challenges the project team faced was both overt and covert resistance to development of the process model. Much of the resistance was overcome by persistent use of verified milestones, deadlines, and accountability. In addition, it was necessary to devise tests of "process realism," so any smoke-and-mirror approaches would be exposed. In this environment, process measures and audits became the norm. By simply adding model requirements to the existing internal ISO 9001 quality audit program, ASD realized a highly effective, low-cost approach to process verification.

This proved extremely helpful in ferreting out those who might be tempted to look for process shortcuts that fell short of the objectives.

The ASD approach to dealing with resistance was to focus on behaviors, not personalities, and to regularly assess performance in attaining the process objectives. With this approach, resisters—those failing to actively engage in the process—were invariably exposed through process performance measures and milestones, and so isolated themselves.

The United Defense model is different because ASD rejected the canned solutions approach and created a tailored process that used only best practices that support our business model.

Tools

With the TDT focusing on simplicity and usability, the tools to build and use the business process model had to be proven Web-based technologies that offered user simplicity and cost effectiveness. A subteam, which included Dashe & Thomson process consultants, reviewed a number of possible solutions before selecting a combination of software technologies that satisfied the essential tool requirements:

- User-friendly with low learning curves
- Commercial off-the-shelf products
- Low risk and low entry cost
- Web-based and highly scalable
- Open architectures and simple interfaces.

Microsoft Visio® was selected for process diagram documents because it is fairly robust, widely understood, and relatively inexpensive. The Visio diagrams are checked in to the intranet and linked using Stellent® Universal Content Management, a flexible, user-friendly, Web-based content management suite that proved to be a high-value choice because of its low initial cost and risk. It was fully deployed in a very short time with the help of technical expertise from Fishbowl Solutions, a local Stellent distributor. Once installed, the software required only minimal user training.

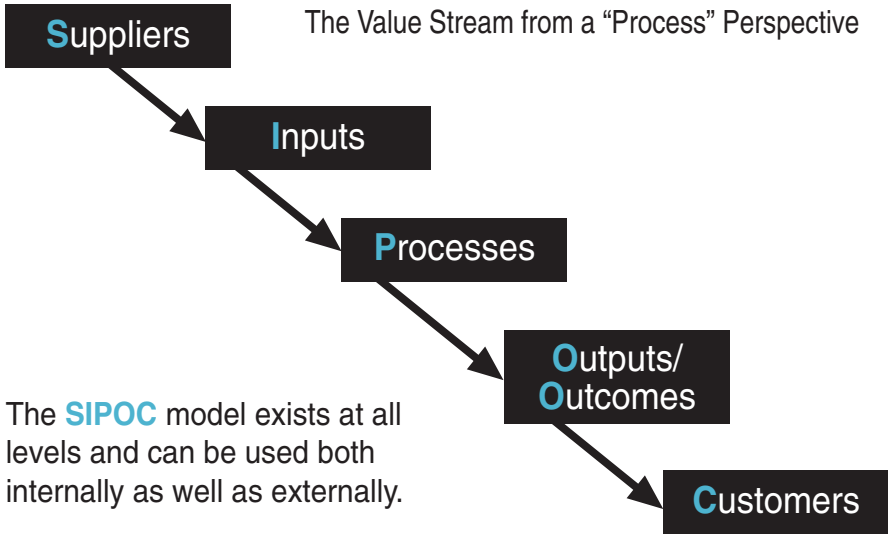
As the team gained experience with these tools, the TDT's vision of simplicity and user-friendliness proved well founded: very few software glitches emerged, allowing the process teams to stay focused on the business of defining and documenting processes. As the business process model emerged, the tools became almost transparent to the users—a sure sign the TDT had met its goals.

Techniques

Clearly defining the business processes proved more difficult than many expected. The age-old (and expected) issues of unnecessary complexity, administrative burden, turf protection, rice bowls, indifference, and even intransigence all had to be addressed—and solutions had to be viable, not only for the process owner but for the organization as a whole. This last idea was sometimes problematic, since in some cases it proved preferable to sub-optimize a specific process in order to optimize the overall process. Explaining this idea to those on the receiving end was challenging, since they often had limited visibility and understanding of the organization as a whole. Clearly, individual and measurable performance objectives had to ensure that support of the business process model objectives were communicated and understood.

In the challenging and sometimes charged atmosphere of defining boundaries, inputs, and outputs, the position of the Dashe & Thomson process consultants as neutral agents was important. Using simple concepts like the

FIGURE 3. **SIPOC Model: the Value Stream from a Process Perspective.**



Lack of training holding you back? DAU has the solution!

When was the last time you or one of your associates attended one of the career acquisition courses offered by the Defense Acquisition University at one of its five regional campuses and their additional training sites?

Did you know industry personnel may also attend?

Are you current on the DoD 5000-series cancellations and revisions? Do you know the latest acronyms and terms?

When was the last time you or your associates took an introductory, intermediate, or advanced course in acquisition, technology and logistics?

Did you know that DAU now offers certification courses that are taught entirely or in part using distance learning? Or check out one of the 55 self-paced learning modules now on our Continuous Learning Center Web site (http://clc.dau.mil/).

We also offer fee-for-service consulting and research programs. And take advantage of our competitively priced conference facilities.

Maybe it's time to talk to your training officer about some additional training opportunities. Or call the DAU Registrar at 1-888-284-4906 to see how we can structure an educational program just for you.

The *DAU 2004 Catalog* is online at http://www.dau.mil. To apply for all DAU classes in the catalog, including Distance Learning classes, go to http://www.dau.mil and visit the DAU Course Schedule. To apply for a course, click on the "Enroll Here" link found in the DAU Home Page banner.

SIPOC model shown in Figure 3, the process consultants walked ASD employees, managers, and directors through the development of their process models. Then using the defined tools, they assembled the processes into "a system of systems" which became the business process model. As this process was completed, the broken interfaces, missing links, and misaligned priorities were systematically uncovered and addressed.

Business Process Model Pays Off

The business process model has now been established and operating long enough to clearly demonstrate the magnitude of the accomplishment. Processes are regularly measured and reported. Internal conflict and tensions are dramatically reduced. Most important for United Defense stakeholders, ASD has generated record-setting financial performances over the last two years. As the division continues to build and model more advanced processes, continually improved customer focus and execution excellence are expected.

In order to ensure that the business process model would become an enduring foundation for improving process management and future growth, it had to be fully integrated into the continual improvement philosophy of the organization. This was a key lesson learned from previous process improvement efforts, many of which turned into "shelfware" when the implementing teams disbanded. The tendency to reinvent process improvement with new management approaches was replaced with an enduring but flexible continual improvement approach in the business process model. Its architecture has provided a robust and flexible framework for integrating other process improvement initiatives, among them ISO 9001 for quality; ISO 14001 for environmental management; CMMI® for software & systems engineering; P-CMM® for workforce development; and "lean thinking." Flexible architecture is essential for accommodating new initiatives and evolving customer needs while always providing a baseline from which to measure improvement.

By starting at the top and consistently maintaining a vision of reducing process complexity and giving process champions latitude to define and improve their processes within the defined process architecture, United Defense has built a system that has proved it can meet the challenges of a continually evolving and changing business environment. By augmenting the expert minds that made ASD successful in the past with the expert knowledge embedded in its business processes, ASD has created a solid path for improving business performance and satisfying customers well into the future.

Editor's note: The author welcomes comments and questions and can be reached at keith.howe@UDLP.com.

PM's Dilemma Hits the Mark

I liked the article "The Program Manager's Dilemma" in the May-June 2004 issue of *Defense AT&L* very much. I particularly liked the author's analogy with "The Prisoner's Dilemma" and the truth tables that illustrated the consequences of the various combinations of trust and don't trust.

I was the software team lead on a contract with one of the prime DoD contractors several years ago, and mutual trust worked quite well. We both made mistakes and both forgave each other when it happened. We managed to avoid blame-throwing and letters to the contracting officer. I agree that if a person must pick one side as a default, it is better to err on the side of trusting even if you get burned a few times. Otherwise, you will be always be callous and suspicious and never reap the benefits of a mutual trust relationship.

One thing people in the government often fail to appreciate is that contractors must make money to stay in business. They can't deficit-spend like the government. Often people view this money-making as greed, when it is only survival. Viewing it as greed leads to mistrust.

Al Kaniss

Acquisition Transformation: Lead into Gold?

Richard B. Rippere

Acquisition reform. Acquisition transformation. Buzzwords or real change? How realistic is it to expect the current acquisition reform initiatives to bring about real transformation?

Every acquisition professional can recite a litany of problems with the acquisition process and point back to Congress, the Federal Acquisition Regulation (FAR), or the DoD 5000 series as the "reasons" the process is as encumbered as it is. But just as often, the *real* reason is this: "That's the way we've always done it in this command."

Should we expect acquisition transformation to change this? Experience has shown there will be no quick fixes or miracle transformations. But even so, it isn't like trying to turn lead into gold. This transformation *can* be achieved as long as we realize that drastic change requires drastic actions.

Much has been written about current acquisition transformation initiatives. The July-August 2003 issue of *PM* magazine contained excellent articles on current efforts to work towards acquisition process improvements, starting with the interview with Marvin Sambur, assistant secretary of the Air Force (acquisition). Sambur has a solid grasp of the precept of evolutionary acquisition as a step to acquisition transformation. Air Force Instruction (AFI) 63-123 codifies the Air Force policy on evolutionary ac-

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Illustration by Jim Elmore

quisition for command and control (C2) systems. It is discussed in the second article in that issue of *PM,* "Evolutionary Acquisition Strategies and Spiral Development Processes" by Kenneth Farkas and Paul Thurston. The article mentions the policy memo that Sambur issued on June 4, 2002, replacing Air Force Policy Directive (AFPD) 63-1 and stating that evolutionary acquisition is now the preferred acquisition strategy for the Air Force. In the fourth article in that same issue of *PM*, "The Underlying Keys to Acquisition," Alexander Slate asks, "Is Acquisition Transformation Doomed to Fail?" Slate emphasizes the importance of the fundamental acquisition processes of need, requirements, prioritization, and asset allocation and makes some suggestions about those processes.

Experience has shown there will be no quick fixes or miracle transformations.

The Need for Out-of-the-box Ideas

I believe the discussion continues because it has not yet been demonstrated that evolutionary acquisition is the true panacea that will heal the acquisition process. I assert that the acquisition community must continuously address all acquisition transformation initiatives and tailor and re-tailor guidance to adapt current government business practices to whatever changing technology and societal mores will sustain. As part of this, we need to invent out-of-the-box practices and assess them for pragmatic feasibility. This is the path to acquisition transformation.

I propose three such procedures, and while they are certainly out-of-the-box, they are not so far out as to be unreachable or unrealistic.

The Technology Dilemma

The case starts with the traditional process. An objective capability is defined, and against it the acquisition program manager (PM) will issue a request for proposal (RFP) for a contract to develop and deliver a system that provides that capability. Evolutionary acquisition allows the PM to create an acquisition plan for spiral development of that objective capability. The PM then awards the contract to the bidder proposing the best solution to satisfy the defined requirements. There are three reasons why the PM may choose an evolutionary acquisition strategy:

1. The development funds are spread across several years.
2. The complexity of the acquisition needs several years to accomplish the objective.
3. The technology is not mature enough to achieve the objective capability in the near time frame.

It's the third reason that causes the dilemma with evolutionary acquisition. If the PM knows precisely what the objective required system capability is, then the program doesn't need spiral development (discounting reasons 1 and 2.) But presumably the PM doesn't know this because none of us knows what tomorrow's technology will be capable of doing for the system. Being realistic, the PM writes requirements for only the first spiral for which technology exists, but the PM wants the objective. So how can the program office evaluate proposals from bidders who equally can't foretell future technologic capabilities but can only propose against the first spiral requirements? How can the PM pick a developer who will deliver the best objective capability, not just the best first spiral capability? All that the proposals can offer is a capability based on today's technology and a "promise" to incorporate tomorrow's technology in future spirals.

So the question for us is this: Is there a better way to plan an evolutionary acquisition and to structure an acquisition strategy that recognizes this dilemma? Or more specifically, is there a way for an acquisition plan to better address the vagaries of spiral development and the unknowns of future technologic capabilities? The answer will truly be a transformed evolutionary acquisition process.

The Answer: A Closer Partnership with Industry

Perhaps such an answer could be called phase II of Sambur's agile acquisition initiative. Sambur said agile acquisition is based on the collaboration of four partners: the requirers, the technologists, the testers, and the acquirer. My suggested phase II adds the developers: our industry partners. Industry must be an integral partner to craft a spiral development strategy that will adapt to the technologists' evolving improvements and the users' correspondingly evolving requirements. In fact, many acquisition instructions call for inclusion of the developer as part of the team. The acquirer (the system program office (SPO)) adds the overall process management and the legal acquisition structure while the tester keeps everyone on track. The PM must find a way to define an ac-

Out-of-the-Box Ideas

1. Industry community as partner during initial concept development
2. Source selection based on demonstrated evolutionary acquisition excellence
3. Test criteria based on capabilities, not requirements

quisition program and issue a corresponding RFP that uses all five partners during all stages of the process to solve this dilemma of unknown future spirals.

Out-of-the-box Idea #1: Concept Development

The industry partner must be included in the initial concept development, traditionally a government-only activity. The draft AFI 63-101 defines a pre-concept refinement phase, followed by a concept refinement phase, then the technology development phase that leads to a system development and demonstration phase, and then the production and deployment phase. The draft AFI 63-101 doesn't discuss the role of industry as a partner in these phases, but it is implied. DoDD 5000.1, paragraph E1.2, in fact, includes the developers as integrated product team (IPT) members for the capability needs definition activity. Traditional acquisition procedures that have early industry involvement include market surveys, requests for information (RFIs), study contracts, fly-offs, down selects, and so on.

Getting the developer—industry and academia—working together with the team from the beginning requires my first out-of-the-box idea. How can we include the developer in the process from the beginning when we don't select the developer until well into the acquisition process, not until after we've defined the concept, the acquisition strategy, and the requirements?

RFIs and similar broad-based calls to industry for idea inputs are the traditional answer. My idea is to consider industry consortia in which several companies, as well as academia, have formed unofficial partnerships to address common themes or problems. And then there are the professional and technical associations and societies—such as the Institute of Electrical & Electronics Engineers (IEEE) and the Armed Forces Communications & Electronics Association (AFCEA)—that are made up of individual professionals and experts. Both appropriate consortia and professional associations could be called upon to join in the agile acquisition phase II partnerships in the early pre-concept refinement and concept refinement phases. Then as the PM uses the partnership to develop the analysis of alternatives and courses of action, the industry development community will contribute pragmatic ideas for real agile evolutionary acquisition.

Out-of-the-box Idea #2: Developer Selection

After the concept is developed, the PM wants to select a developer who will be the best choice for delivering the objective capability after an evolutionary acquisition of numerous spirals. Traditionally, the PM defines requirements in a technical requirements document (TRD) that becomes part of the RFP. The source selection team picks the bid that proposes the best satisfaction of this TRD. But this doesn't get out of the box to solve the dilemma of unknown future technology. The TRD contains the requirements for only the first spiral. How can the PM overcome the traditional dilemma of using only the TRD for the first spiral to select the developer for the objective system?

The best tool the PM has in the traditional process is the past performance criteria of the source selection process. Does the company have a good track record of maintaining a cost-effective quality development process, responsive to evolving requirements? Or does the company have a poor history, such as underbidding on the first spiral and then getting well on subsequent spirals?

This brings me to my next out-of-the-box idea. The company's long-term processes are more important than the near-term technical offering. Proposals must address the corporate processes to work in partnership with the technologists (the labs and academia) to track emerging technologies and to plan flexible alternatives for using the emerging technologies. Pre-planned product improvements (P^3I) give way to flexible spiral technology paths and incremental emerging technology capabilities. What is the company's process for keeping its designs truly modular as an open system architecture to permit flexible technology insertion in the future?

My agile acquisition phase II makes demonstrated performance as an evolutionary acquisition developer a primary source selection criterion. A proposed satisfaction of a single-spiral TRD should be a secondary criterion. Past performance evaluation will consider how well the company has participated in industry/academic consortia to help the government plan for evolutionary technology insertion. The draft AFI 63-101 not only calls for a technology development phase, but also requires a strong technology transition plan. Source selection criteria should also put weight on the company's proposed technology transition plan and its past performance in executing technology transition. Has the company been willing to overcome the not-invented-here syndrome by selecting and integrating technology and capabilities developed by others? And certainly the evaluation must look at how well the company has maintained a cost-effective,

best-value spiral development process on previous contracts.

Out-of-the-box Idea #3: New Test Paradigm

The evolutionary acquisition spiral development process presents a significant dilemma for the test member of the partnership. What are the test criteria for spirals that don't have well defined advance requirements? Just as in the discussion of capabilities-based acquisition, how does the PM test for evolving capabilities rather than against static requirements? The draft AFI 63-101 puts a lot of emphasis on ensuring the testers address the problems imposed by spiral development.

> A transformed evolutionary acquisition process must continuously examine and update the traditional processes and must also use new, out-of-the-box practices.

The PM and tester must create a suitable new test paradigm to determine the success of each spiral. This new paradigm is my third out-of-the-box idea. The tester must be integral to the five-member team so that the test or acceptance criteria for each spiral are allowed to evolve as the acquisition evolves. The criteria must be open-ended to determine when spirals have produced value-added capability for the warfighter, without regard for pre-conceived notions of what the requirement was "supposed" to be. For instance, the requirer might have thought he wanted a cube, but the best capability might turn out to be in a sphere.

Let's imagine a requirement for a personal combat weapon no bigger or heavier than an M-16. It must have lethal capability against any person or vehicle up to high-mobility multipurpose wheeled vehicle (HMMWV) size at any range that's in line of sight. It must be operator-adjustable to be either lethal or non-lethal. It must have automatic aim capability with 99.9 percent probability of kill and be smart enough not to fire in lethal mode against any friendly target or any non-combatant target. It can be connected, wirelessly, to remote sensors already available in the battlespace.

If that reminds you of something—you're right. Gene Roddenberry conceived such a weapon, called it a phaser, and equipped Captain Kirk's Starship Enterprise crew with it. It always killed or stunned on command and never hit a friendly. But is it simply the stuff of science fiction? Not altogether.

In fact we do have personal weapons that have variable muzzle velocity to either kill or not kill. We have laser spotters and designators. Electronic battlefield networks that will connect every soldier to remote sensors are in development. Even so, we still wouldn't issue an RFP based on these requirements today because technology is still not all in place yet. With agile acquisition phase II, a consortium of industry and academic experts would lay out a logic diagram of what could be done through spiral development if various technology options come to fruition. Based on this, the PM would select a developer who had a demonstrated track record of working with laboratories to spirally develop a system along such potential technology paths. Along these paths, the developer would deliver incremental capability upgrades as appropriate technologies matured. The tester would determine when these spirals warranted fielding of the next increment of capability.

The Musts for Transforming Acquisition

A transformed evolutionary acquisition process must continuously examine and update the traditional processes and must also use new, out-of-the-box practices. Industry and academic partners must be brought into the concept planning process early on. The PM must select the development contractor based on meaningful evaluation of the contractor's spiral development processes for technology insertion. The PM must have new spiral development test strategies that don't need pre-determined requirements for each spiral.

None of that is alchemy. And Congress, the FAR, and the 5000 series aren't standing in the way.

Editor's note: The author welcomes comments and questions. He can be contacted at richard.rippere@hanscom.af.mil.

And Now For Something Completely Different

Honesty, Courage, and Starting Over

Capt. Daniel Ward, USAF

John McLaughlin, CIA deputy director, once warned, "Our country is vulnerable—if our intelligence analysts are not ready for something completely different from what they have experienced in the past." That was March 11, 2001. Exactly six months later, something completely different and apparently unanticipated did indeed happen.

McLaughlin's prediction and warning has something to teach not only the intelligence community, but the technology development community as well.

Anticipating the Unexpected

The safest thing to say about the future is that it will be full of unexpected events. While the details of those events, activities, and developments are largely unknowable, no one should be surprised to discover that the future is going to be ... surprising. We may try to minimize the uncertainties and prepare for any possible outcome, but our crystal balls get murky the farther we try to look. That murkiness is one of life's great certainties, and it is an area deserving of our attention.

Of course, some future events can be predicted easily. But along with preparing for predictable outcomes, there is a full spectrum of possible surprises that may require a program manager (PM) to make a course correction. So PMs need to establish a mechanism—a flexible, simple mechanism—for responding quickly and smartly to life's inevitable surprises.

The SAWABI Approach

In the most extreme cases (which may or may not be uncommon) the recommended approach is called "SAWABI," which stands for "Start Again With A Better Idea." Once you decide to do it, implementing SAWABI is quite simple. The tricky part is determining that a SAWABI approach is necessary. Such a decision requires equal parts objectivity, honesty, and courage. Here are the steps for using this method.

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We ought not abandon every project at the first sign of difficulty, but we probably should exercise the option more often than we do.

Step One. Acknowledge that SAWABI is an option. PMs don't need to keep doing everything they are currently doing, particularly if there is a better idea out there somewhere. Given the dynamic nature of the unknown future, we can't expect always to find the best ideas on the first try. Software guru Eric Raymond recommends that programmers should "expect to start over at least once," and smart PM's should be willing to do so as well.

It is important to understand that SAWABI covers a wide range of "starting over" activities, from a minor adjustment to a completely blank sheet. It doesn't always mean canceling an entire program; it could simply involve retooling a particular process or approach.

Step Two. Take an objective look at the situation and determine whether the current approach is the right one. Note we did not say "the best" or "the ideal": it is often sufficient to be adequate. Sometimes a better technical approach exists, but the cost of changing exceeds the benefit. A better idea, by definition, encompasses cost, schedule, and performance considerations. If a technology's corresponding impact on cost and/or schedule is unacceptable, then it is not really a better idea, just a better technology. And they're not the same thing.

Step Three. Make the call. Do your homework, get your ducks in a row, and start making the case for starting over. In the current acquisition framework, this is sometimes easier said than done, but despite the difficulty, it is indeed possible.

G. K. Chesterton warns against pulling something down "without even pausing to ask why it was put up" in the first place. He explains that unless we understand the reason for something's existence, we cannot "judge whether the reason was reasonable," and so we ought to be very reluctant to remove, replace, or destroy it. Thus, a SAWABI decision, which by definition involves abandoning an existing thing, must begin with an understanding of the thing's original purpose. As Chesterton goes on to explain, once we understand "how it arose, and what purposes it was supposed to serve, [we] may really be able to say that they were bad purposes, or that they have since become bad purposes, or that they are purposes which are no longer served."

Getting Out of Zimbardo's Prison

Anyone who sat through Psych 101 probably encountered the infamous prisoner/guard experiment performed by Stanford professor Phillip Zimbardo. In brief, Professor Zimbardo brought a group of undergrads together in a "prison" constructed in the basement of the university's Psychology Building and randomly assigned them to be either uniformed prison guards or prisoners. The experiment, intended to last two weeks, rapidly degenerated into a seething stew of cruelty and depression, and the experimenters were forced to cancel it after six days.

The most interesting and relevant point is that each participant could have opted out at any time, but almost all stayed—even the grossly mistreated prisoners—until the experimenters called it off. All the participants had to say was, "I'm done," and they'd go back to real life. They knew they had the authority and ability to cease their participation. Maybe they got caught up in the moment and

Given the dynamic nature of the unknown future, we can't expect always to find the best ideas on the first try.

forgot they did not have to proceed. Surely they were not comfortable, didn't think all was well and appropriate, particularly the unfortunate prisoners. Yet they didn't act on their own responsibility to put a stop to it.

The lesson for PMs should be obvious. We may not be able to walk away from a bad program as easily as Zimbardo's subjects could have, but we do indeed have the ability and responsibility to speak up when a situation degenerates. We need to make the call and advise our superiors accordingly, waving the SAWABI flag whenever a current trajectory needs adjusting—or cancelling.

SAWABI: Chaos and Innovation

SAWABI appears to inject a certain degree of chaos into a program by removing the assurance of continuity. What SAWABI actually does is acknowledge the ambiguity that is always there and enable a PM to respond appropriately. This is all to the good because the certainty inherent in some programs is unfortunate, unwarranted, and unwise. An assurance of programmatic continuity, regardless of performance, can have a numbing effect. The presence of a SAWABI mechanism removes that assurance and its associated numbness, thereby facilitating innovation and growth. When we know that any program we begin is probably destined to last indefinitely, there is little conscionable space for experimentation or error, for fear of propagating a poor result. But if we are free to start in one direction and then start again with a different tack later, we are more likely to explore new ground, make some interesting mistakes, l*earn something*, and go on to discover the better idea we'd been seeking all along. Absent a SAWABI mechanism, we will find it much harder and slower to apply our learning in a timely manner or to grow.

Of course the opposite response is also possible. Once SAWABI is an option, some PMs may be reluctant to take risks or try something new, for fear that the program will be cancelled. That is why a SAWABI mechanism has to be relatively painless and not reflect poorly on the brave souls who attempt to use it. Without a painless SAWABI mechanism, fear of failure, fear of waste, and fear of getting it wrong will lead directly to waste, failure, and wrong answers.

Even if a SAWABI approach does cause some discomfort, there are times it must be pursued, nonetheless, with courage and honesty. Given the types of systems we develop in the DoD acquisition and development community, a lack of courage or a lack of honesty are frankly inexcusable. Lives and national security are at stake, so fear must not dictate our behavior or decisions. SAWABI, therefore, indicates the presence of these two key virtues—courage and honesty—both of which are absolutely vital attributes for a PM. Those who need a little more encouragement would do well to read the White House's National Security Strategy from September 2002, which explains: "The major institutions of American national security were designed in a different era to meet different requirements. *All of them must be transformed*" (emphasis added).

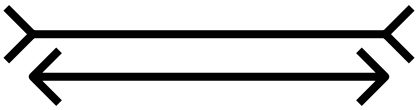
Sunk Cost and Cognitive Bias

For the politically minded, abandoning previous investments appears to indicate poor judgment; in fact, making a course correction is actually a sign of *good* judgment. After 21 years and $8 billion, if we don't have a useful system, it is probably time to SAWABI. At some point, continuing on a fruitless trajectory is no longer admirable persistence, but rather a sign of possible mental illness. At the very least, it is evidence of an unfortunate cognitive bias.

PMs must wrestle with a common cognitive bias for programmatic stability—a preference for keeping programs alive even if they should be cancelled. Interestingly, this

bias exists even if you know it's there. You've probably seen this illustration:

Those who aren't familiar with the optical illusion may need to be told the two lines are the same length. The



funny thing is, even though you *know* the lines are the same length, they still don't *look* the same. Even after you measure them, your eyes will continue to insist the upper line is longer. In this simple scenario, your perception contradicts your intellectual knowledge. The question is, which will guide your actions? Now imagine the following situation:

A hungry lion is behind Door #1 if the lines are the same length. If they are different lengths, the lion is behind Door #2. You must open one door.

Which do you choose? Which source of data do you trust—your eyes or your intellect?

Similarly, a PM may know that Project X or Process Z needs to be cancelled/replaced/modified. According to my college economics professor, one is not supposed to take sunk costs into account when evaluating future options. But even though a PM may know intellectually not to include sunk costs in his or her calculations, there is a strong tendency to argue in favor of existing programs "because we've already spent $30 gazillion." What course of action should that PM take? Fear of failure and criticism leads in one direction and is supported by a cognitive bias for continuity. Honesty and courage point in the opposite direction, and require us to trust what we know to be true.

Letting Go of the Rope

There's an old saying that you can't unring a bell, but you can stop pulling the rope. In other words, we can't undo the past, but we can do something different in the future. Cancelling programs does not waste money: it prevents continued waste. Retooling a process, restarting a program, pursuing a demonstrably superior idea may indeed involve abandoning previous investment, but such courses of action also prevent throwing good money after gone money. SAWABI is indeed a fiscally responsible option when implemented judiciously.

The British comedy troupe Monty Python's Flying Circus used the phrase, "And now for something completely different …" as a segue between sketches. It's a phrase PMs should seriously consider adding to their vocabulary. Whether a SAWABI approach results in shorter meetings or an entirely new endeavor, when a better idea exists it is often worth pursuing. The key to maintaining this responsive, flexible posture is a firm commitment to honesty and a courageous objectivity. We ought not abandon every project at the first sign of difficulty, but we probably should exercise the option more often than we do. Rather than remain in Zimbardo's prison, we need to recognize our obligation to speak up and opt out when the situation warrants it.

And remember—just because one line looks longer doesn't make it so.

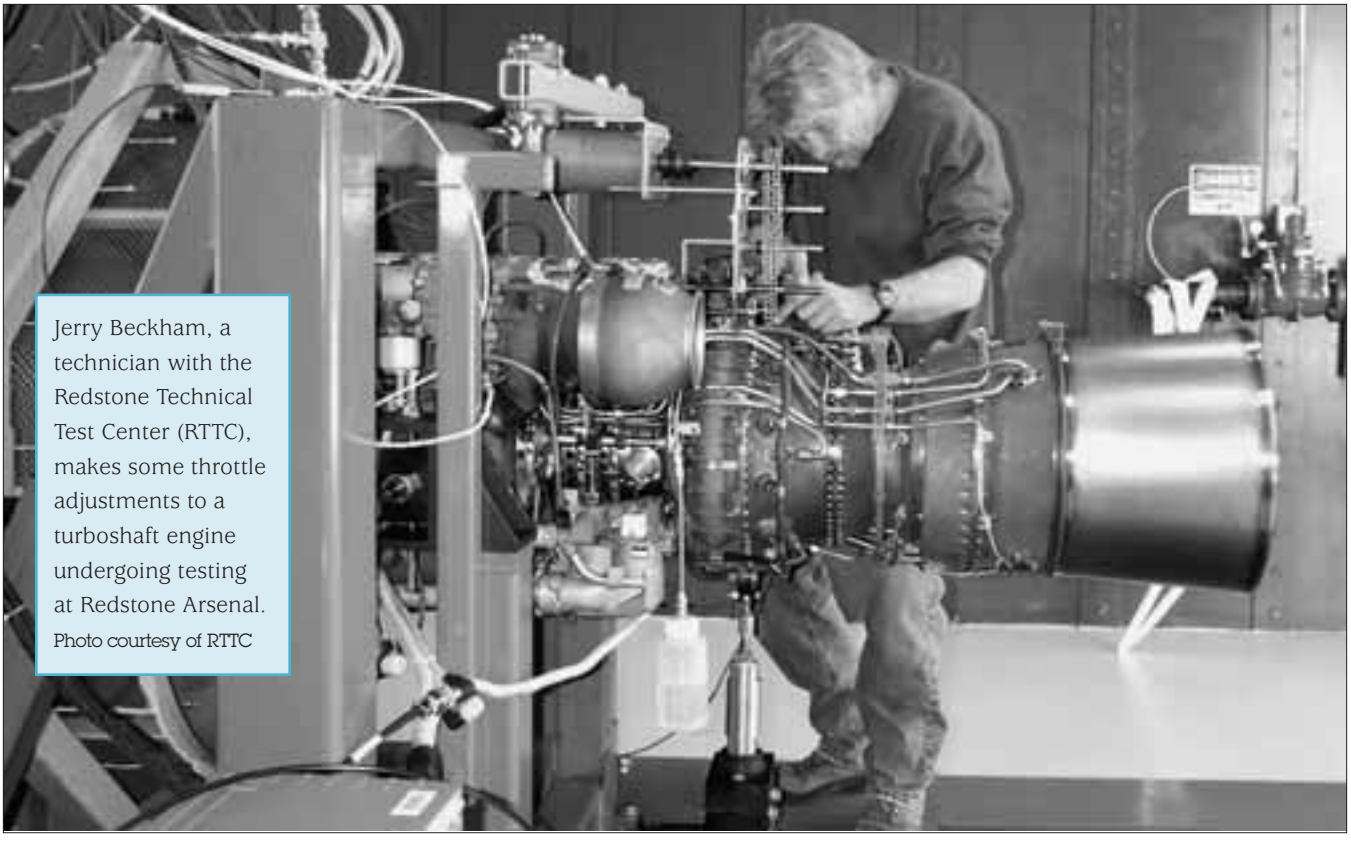
Editor's note: The author welcomes comments and questions. He can be reached at wardd@nga.mil.

An assurance of programmatic continuity, regardless of performance, can have a numbing effect.

Pushing Performance

Redstone Arsenal Test Lab Helps Army Evaluate Turboshaft Aircraft Engines

Michael Cast



Jerry Beckham, a technician with the Redstone Technical Test Center (RTTC), makes some throttle adjustments to a turboshaft engine undergoing testing at Redstone Arsenal. Photo courtesy of RTTC

The high-pitched whine of turboshaft helicopter engines is figuratively music to the ears of Army testers at Redstone Arsenal in Alabama because it is the sweet sound of success for a multi-year team effort.

In early August 2002, the Redstone Aviation Propulsion Test and Research Facility (RAPTR), officially opened. RAPTR is a state-of-the-art facility designed to test helicopter turboshaft engines and their components, reducing the need to test aircraft in flight and so saving money and time. It owes its existence to the Army's Integrated Material Management Center (IMMC), which provided funding for its construction, and to the Research, Development and Engineering Center (RDEC) and the Redstone Technical Test Center (RTTC), two key players in the research, development, test, and evaluation program that combined resources to make RAPTR operational.

Although technically assigned to RTTC and within the security boundaries of that center's Static Test Branch, RAPTR is really a joint operation between RTTC and RDEC's Aviation Engineering Directorate. RTTC, a technical test center of the Army's Developmental Test Command, provides facilities, mechanical and electrical support, and test engineering and operator support, while the Aviation Engineering Directorate (AED) provides design engineering, test engineering, and an engineering research staff capable of resolving performance and design issues that may arise during testing.

"This partnership between RTTC and AED has been very successful and has given our customer base added value

Cast *is a public affairs specialist with the U.S. Army Developmental Test Command. He has served the army for 22 years as a journalist and photographer, newspaper editor, speechwriter, and public affairs specialist.*

in turboshaft engine testing," says Doug Chapman, an RTTC test engineer involved with the program.

The facility enables testers to acquire a variety of data about the performance of turboshaft engines and their components. An engine under test pulls in ambient air to operate, and a dynamometer also uses intake air to put a load on the engine's main rotor shaft. RAPTR can generate up to 3,500 shaft horsepower and up to 800 foot/pounds of torque. It has a fully automatic control system that starts the engine and performs pre-determined operational cycles and power levels. The system can emulate engine horsepower and load "profiles" with the aid of software that controls the various engine test scenarios.

It is very important that the control system continuously monitor certain sensors and measurements during any test to prevent a catastrophic failure that could harm personnel, the facility, or engine hardware, Chapman notes. If "redline" events that cause concern for testers occur during a test, RAPTR is designed to stop the test automatically and allow testers to take precautionary measures before resuming. Much of the RAPTR instrumentation has pre-defined levels for safety, causing RAPTR to go into redline when those levels are exceeded. The RAPTR control software can automatically shut the engine down to idle and/or cut off the fuel supply within milliseconds. RAPTR is currently able to monitor and record up to 500 channels of instrument data—including speed, torque, temperature, pressure, airflow, and so on—for long periods of time, at a cost of less than $500 per test hour.

RAPTR operators are capable of installing, removing, and assembling and disassembling an engine on-site. Additionally, component alignment and bore-scope investigation are provided within the test cell.

The facility is a "best value alternative" for aircraft engine testing for several reasons, according to Chapman. It provides a low-cost, state-of-the-art test capability for engines and their components and allows for a timely and dedicated response to developmental and field problems, he points out. A hands-on facility, RAPTR helps train new engineers and gives confidence to a more experienced staff of design engineers. It has proved its role as a vital testing tool for Army Aviation and related organizations, and it provides an independent correlation standard not available with industry or contractor testing at their facilities, Chapman says.

RAPTR is a state-of-the-art facility designed to test helicopter turboshaft engines and their components, reducing the need to test aircraft in flight and so saving money and time.

Looking Forward

Expanded instrumentation, specialized test capabilities, and expanded engine models are planned for the future. The future facility will have an engine test cell 2 that includes a separate self-contained additional test bay with heated fuel and lubrication, as well as expanded data channels and an expanded data acquisition and control system. Designs are currently under development, and some of the initial groundwork is being accomplished, Chapman says. The tentative startup date is the first quarter of fiscal year 2005. Electronic component testing capabilities for the future are defined, according to Chapman, and are waiting on funding. The tentative startup date is sometime in fiscal year 2005 or 2006.

Capabilities for a transmission test facility are being defined, and funding is being requested. RTTC is also planning to add a Rotor Spin-Pit to RAPTR, but Aviation Engineering has not placed requirements for this capability very high on the priority list. At the time this article was prepared, no planned startup dates had been determined for these projects. RTTC is also developing the capability to conduct hydraulic component testing at another facility within the test center.

"The Army has high expectations for aviation propulsion systems and propulsion technology in the objective force," said Paul Bogosian, deputy program executive officer for aviation, at the ribbon-cutting ceremony in 2002. "As we look at the systems we take forward—the Apache, Black Hawk and Chinook—what we do to deliver objective force capabilities is highly dependent on propulsion capabilities. A lot of what we determine, and the path ahead that we set for the Army when it comes to propulsion technology, will be pursued in this facility. That's very gratifying. This is a wonderful opportunity for all of us, and we're glad it's here."

Editor's note: The author welcomes questions and comments and can be contacted at michael.cast@dtc.army.mil. Cast acknowledges the *Redstone Rocket* Army newspaper for publishing statistics that led him to further research RAPTR.

Certification for Government Oversight of Manufacturing

Scott S. Haraburda and Jim Gary

The Chemical Stockpile Disposal Program (CSDP) is a U.S. Army program implemented to destroy the nation's stockpile of chemical warfare agents by April 29, 2007. The Newport Chemical Agent Disposal Facility (NECDF) was designed and built to neutralize the chemical nerve agent VX.

This low-temperature and low-pressure neutralization process is different from the baseline technology of incineration previously selected by the Army in that it uses chemical reactors instead of incinerators. Thus, it was necessary to develop new competencies within the Newport government team responsible for the oversight of the systems contractor tasked with destruction of the chemical weapons. The government team decided to formalize a qualification and certification process to develop and test these competencies.

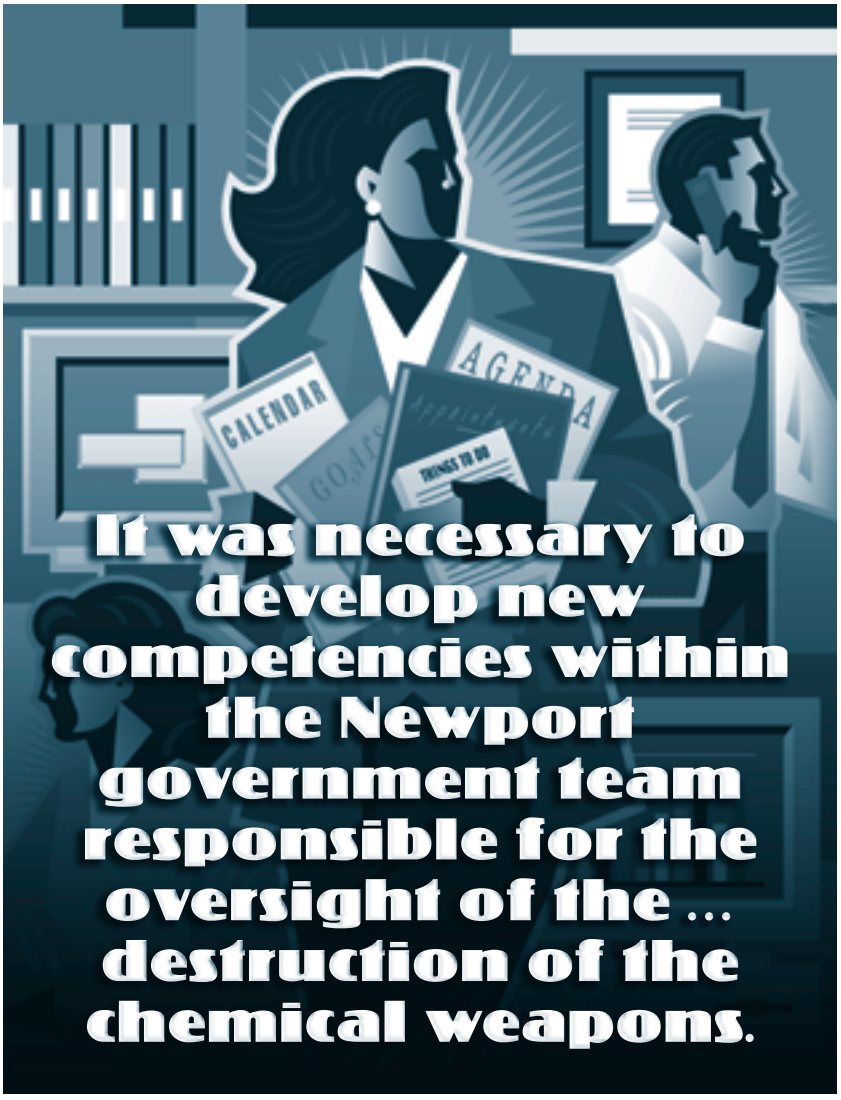
Qualification and Certification Process

The qualification and certification process provided a common method to ensure consistent oversight at the government operations field site by all government employees and oversight support contractors. It was also intended to provide documentation proving that government field office personnel were adequately trained to conduct effective oversight of the government operations plant. The process is designed to transition an individual with a general background in industrial plant operations into a highly trained oversight employee. Completion of the following seven phases is required for certification:

- Oversight training
- Qualification training
- Required reading
- Critical systems demonstration
- Oversight effectiveness training
- Oral board completion
- Management signoff.

Oversight Training

This course introduced the requirements and expectations of the oversight and further described the three-step process towards conducting effective oversight. The first



Haraburda *is the deputy site project manager for operations at the Newport Chemical Agent Disposal Facility, Newport, Ind. He holds a bachelor's degree in chemistry and a master's and doctorate in chemical engineering.* **Gary** *is an operations specialist providing technical support in chemical plant operations to the government field office at the Newport Chemical Agent Disposal Facility. He has a bachelor's degree in chemical engineering and a master's degree in business administration.*

step involved the preparation necessary for determining the specific areas to be observed. The second step involved the actual observations, using 18 areas specified in the *2001 Department of Energy (DOE) Conduct of Operations for DOE Facilities* manual, which is considered to represent best management practices for government operating plants (see sidebar "Government Oversight Checklist"). The third step was the feedback generated from the observations, especially to the operators being assessed.

The oversight process was reinforced through the use of a case study and practical exercise. The case study was a thorough examination of historical and other public documents involved in the 1984 methyl isocyanate release at the Union Carbide plant in Bhopal, India. The practical exercise involved an actual assessment of a task being performed at the government field site on the day of the course.

The course also reviewed the U.S. Chemical Safety and Hazard Investigation Board's investigation of the hazards actually experienced within the chemical industry. Successful completion of the 12-hour course included attendance at the classroom lessons and field exercises, and completion of the case study homework and the practical exercise. Other individuals, such as system contractor personnel, were allowed to audit this course to understand the processes being used to conduct oversight at the site.

The most interesting part of the course was the case study assignment, which was designed to focus upon a chemical industry accident. Applicable documents from different sources were given to the students in an effort to get them to look at situations from different perspectives. To complete the case study assignment, students were required to do the following, citing the sources and rationale for each answer:

- Describe what led up to the accident.
- Identify the major contributors to the accident.
- Describe the root cause or reason for the accident.
- Identify six lessons learned from the accident.
- Using the DOE Conduct of Operations philosophy, assess the situation at the time of the accident for 18 listed areas.
- Explain public beliefs about the accident; identify the sources of information that were credible and those that were not; explain which source the student believed.
- Describe personal and professional lessons learned from the case study, and explain its impact upon the student's abilities to perform oversight.

Qualification Training

This combination of classroom training and field exercise training is designed to give students an understanding of such plant systems as chemical reactors, bulk storage, utilities, heating and ventilation, and fire protection. Students learned plant processes and procedures, such as lockout/tagout (LOTO), emergency response, and hazardous waste management. This is the same training that the systems contractor uses to train its operations workforce, ensuring that the government oversight personnel have the same knowledge of the facilities as the workers.

Required Reading

Each government oversight person is required to read several key documents and verify completion and understanding. The documents include plans, such as the government field office oversight plan; procedures, such as accident reporting and investigative procedure; and programs, such as the chemical personnel reliability program. Included within this reading list are the major documents that the systems contractor personnel use.

Critical Systems Demonstration

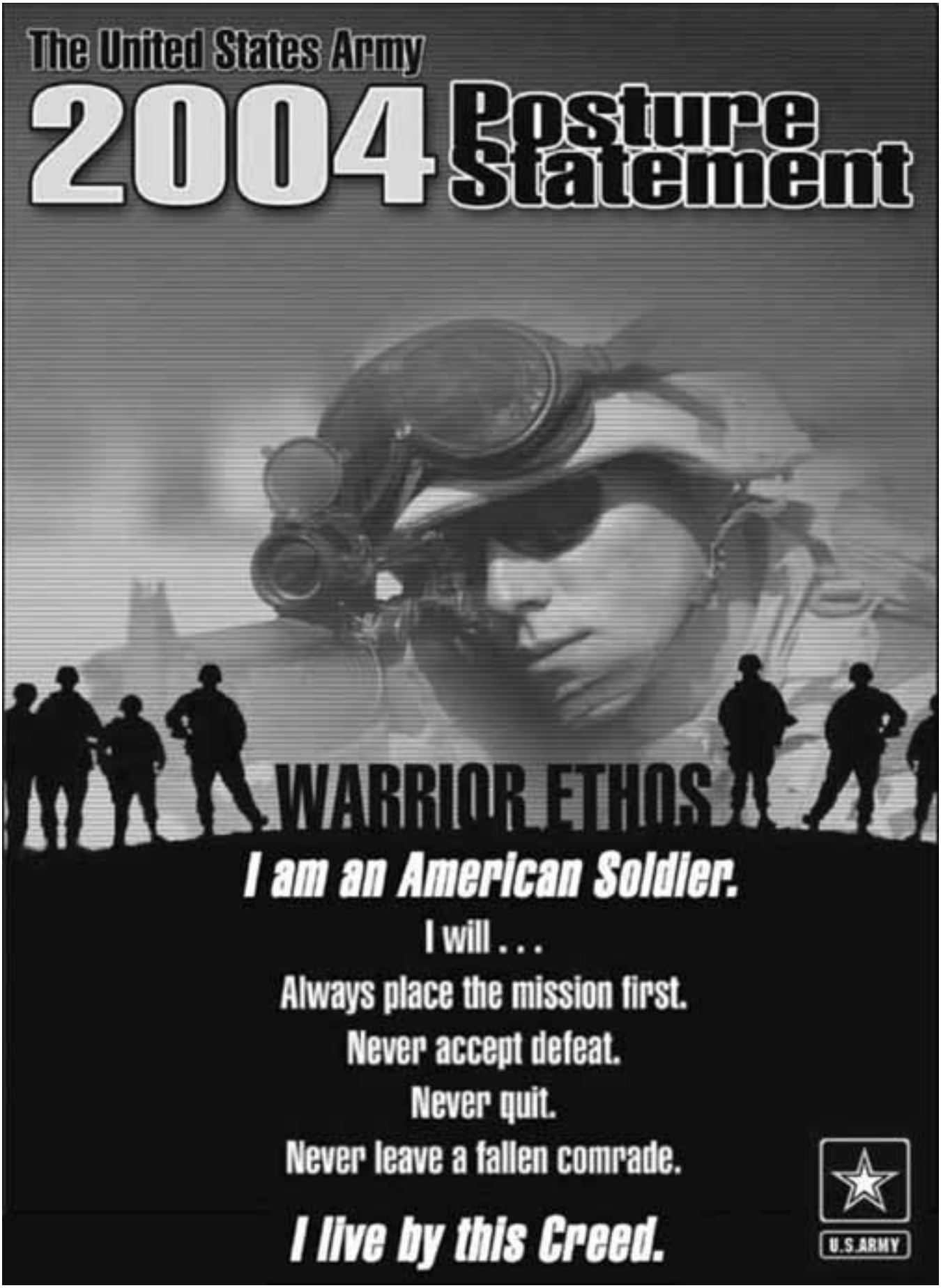
Each government oversight person is required to demonstrate operations familiarity through a walkdown of the facility. This is necessary to ensure that the oversight personnel know how the operations process functions and how the operations workers carry out their responsibilities. During the demonstration, the individual is asked to physically locate key systems and specific pieces of operating or safety equipment and is required to answer questions relating to functions and performance details of the systems or equipment.

Oversight Effectiveness Training

To ensure that oversight activities are executed in a consistent manner from shift to shift, government oversight personnel participate in a series of roundtable training and discussion sessions that focus on the details of the Conduct of Operations topics introduced through the oversight training. Each session results in the preparation of guidelines that individuals place into a reference book

Government Oversight Checklist

- Management Accountability
- Shift Routines
- Control Activities
- Communications
- On-Shift Training
- Emergency Response
- Notifications
- Equipment Status
- Safety
- Verifications
- Log-Keeping
- Operations Turnover
- Unique Processes
- Required Reading
- Timely Orders
- Procedures
- Operator Aids
- Equipment Labeling


The United States Army
2004 Posture Statement
WARRIOR ETHOS
I am an American Soldier.
I will . . .
Always place the mission first.
Never accept defeat.
Never quit.
Never leave a fallen comrade.
I live by this Creed.
U.S.ARMY

that is the main component of a document called the "Playbook" (following the concept of a football playbook, which documents what each player will do when any given play is called). As with a football playbook, having the whole team learn the play, practice it, and recognize it when called, maximizes the chances that all team members run the play the right way and the same way every time.

The assigned government oversight personnel develop guidelines based on the following suggested resources:

- Project document research
- Handouts from other oversight training activities
- Discussions with knowledgeable individuals at the site
- Discussions/visits with key personnel at other similar sites
- His/her own personal experience
- Any other source deemed appropriate by the preparer.

Once drafted, the guidelines are presented to the rest of the oversight group for discussion and training purposes in a roundtable setting and format. Based upon group feedback and comments, the guideline is either accepted and loaded into the Playbook or revised and presented again to the group at a later time for final acceptance. This process is continued until all assigned topics have been completed and are in the Playbook. Once in the Playbook, all government oversight personnel follow the guidelines in the execution of their oversight duties while on shift.

Oral Boards

Students sit for an oral examination that covers all of the previously described phases of training. The Oral Board is composed of senior government field office managers and experienced people from outside sources, such as other chemical demilitarization sites. The Board develops review questions and distributes them to all candidates in preparation for examination. In addition to technical questions, the board prepares situational questions that explore the individual's ability to apply technical knowledge to specific situations.

Government Management Signoff

Once a candidate has satisfactorily completed all the previous phases, the government site manager provides the final approval. The manager may order additional or remedial training for any individual where a need is determined.

A Model Approach to Effective Oversight

The Newport chemical demilitarization site used this disciplined approach to develop effective government oversight during the manufacturing process phases in the acquisition cycle. It is a method that allows the project management team to ensure that its people have the requisite skills and knowledge, and it ensures that the necessary documentation was developed to verify that oversight people had the appropriate qualifications. A similar approach can be used by any acquisition project for oversight during manufacturing.

Editor's note: The authors welcome comments and questions. Haraburda can be reached at scott.haraburda@us.army.mil and Gary at james.gary@necdf.necd.army.mil.

The AT&L Performance Learning Model

Christopher R. Hardy and James McMichael

The mission of the Defense Acquisition University (DAU) is to provide practitioner training, career management, and services to enable the AT&L community to make smart business decisions and deliver timely and affordable capabilities to the warfighter. The most far reaching learning and development initiative we have undertaken since becoming a premier corporate university is the full deployment and refinement of our multidimensional learning construct—the AT&L Performance Learning Model (PLM).

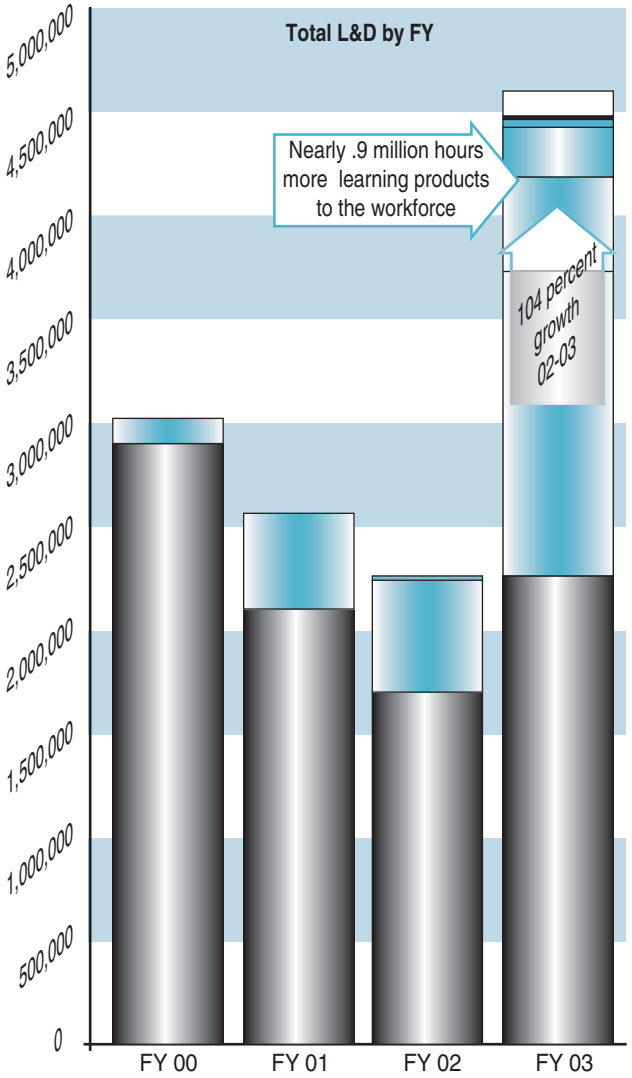
A Flexible, Responsive, and Agile Learning Environment

As an overarching learning model, the PLM helps us focus on more than classroom training and provides us a broader mission to ensure we include all of our additional learning assets in the educational products and services we provide our customers in the Department of Defense (DoD) AT&L workforce. As DAU has evolved, so too has the PLM. Using this new paradigm, DAU will help provide a learning environment for all AT&L organizations where (in the words of learning organization guru Peter M Senge) they "cannot *not* learn," balancing what we now provide—training courses, knowledge sharing, continuous learning, performance support, and rapid deployment training—with local learning resources and infrastructure by means of a learning network.

Transparent to the learner, the PLM will provide convenient and economical access to learning products 24 hours a day, 7 days a week—a learning network where members of the AT&L workforce can seamlessly access learning assets. With the PLM as a foundation, the 134,000 members of the DoD AT&L workforce will have a more flexible, responsive, and agile learning environment. Full deployment of the PLM as a network of learning assets will significantly expand the learning environment and will enable DAU to help focus and align all collective learning assets to the strategic business goals of our senior leadership. This customer-focused approach will signifi-

*As DAU's strategic planner, **Hardy** helps to set the direction for the university. He has a doctorate in adult and continuing education from Virginia Polytechnic Institute and State University. **McMichael** is executive director of learning programs and technology for the DAU. His doctorate is from the University of Delaware, and he was a fellow in Princeton University's Woodrow Wilson School of Public and International Affairs.*

Power of the PLM



Total Learning & Development Hours

	FY 00	FY 01	FY 02	FY 03
Classroom hours	2,900,000	2,100,000	1,700,000	2,260,000
eLearning hours	120,000	463,000	540,000	1,470,000
CL module hours*		331	20,382	456,423
AKSS site hours				240,000
ACC site hours				37,000
RDT hours				18,000
PS hours				118,800
Total Hours	**3,020,000**	**2,563,331**	**2,260,382**	**4,600,223**

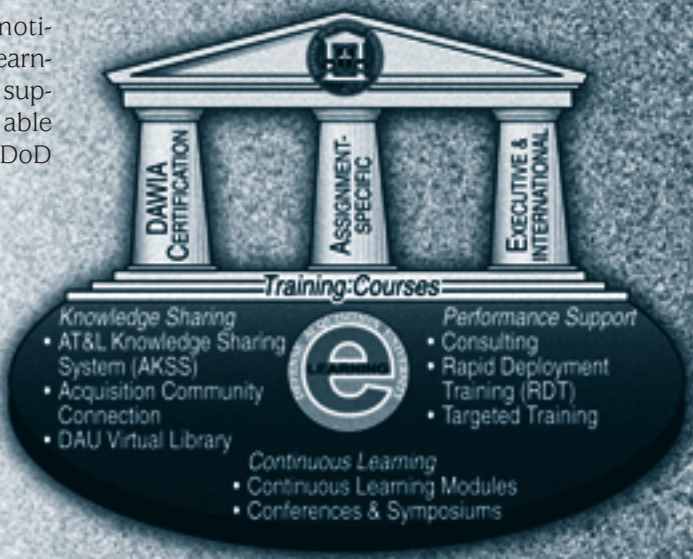
**includes AWF hours in non-DAU hosted courses*

cantly contribute to AT&L Goal Number 7—a motivated, agile workforce—extending the concept of learning beyond the classroom into the workplace to support field organizations' needs. DAU will now be able to facilitate learning organizations throughout the DoD AT&L community.

Major components of the PLM are:

Training Courses

DAU offers over 90 mandatory certification, assignment-specific, executive, and international courses spanning 13 career fields. This year, DAU will deliver training to almost 60,000 graduates via 1,170 offerings through an appropriate mix of classroom, Web-based, and hybrid offerings.

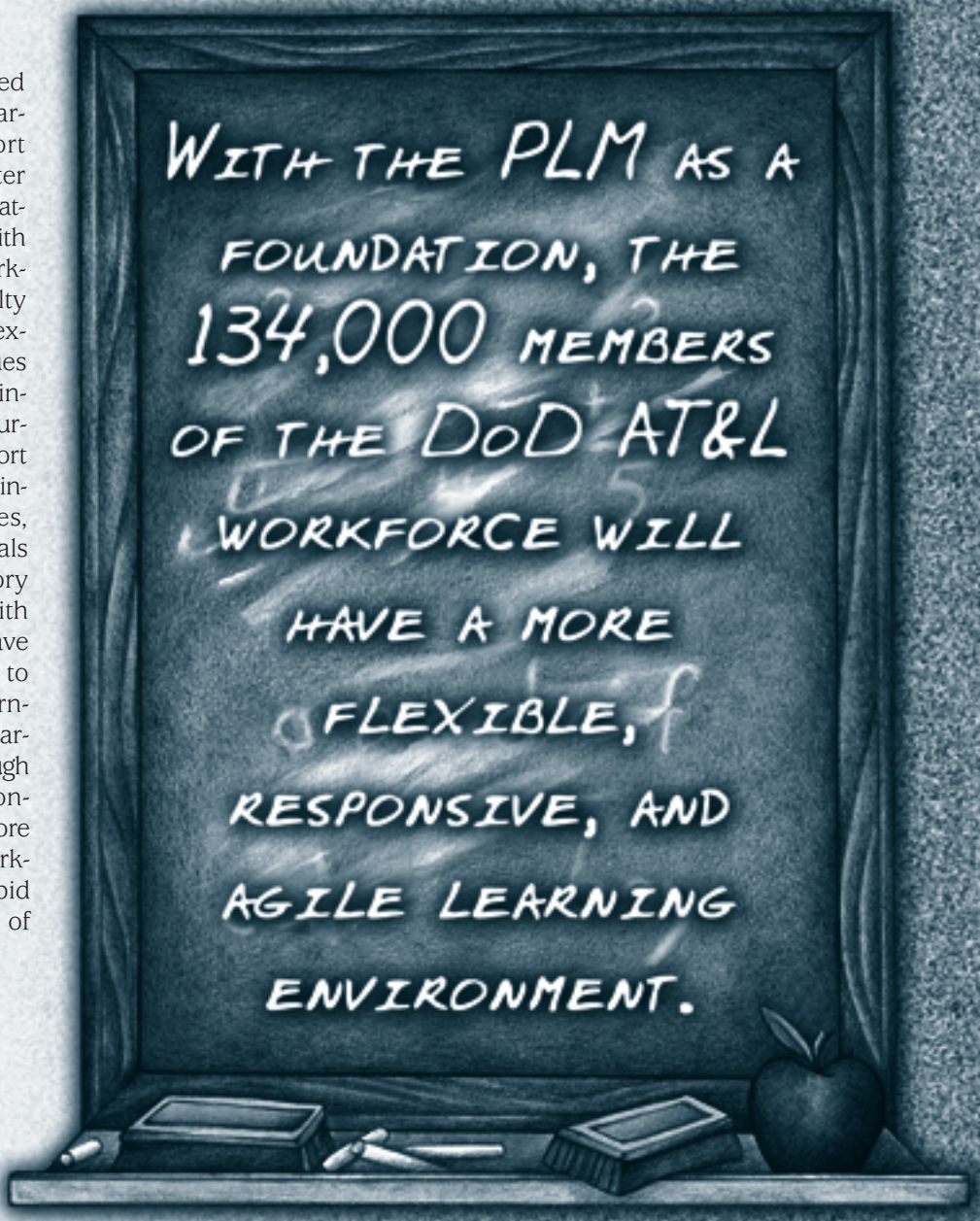


Performance Support/Rapid Deployment Training

Through on-site consulting, targeted training, and online knowledge sharing tools, DAU continues to support students and their organizations after the classroom experience. Subject matter experts provide the workforce with solutions and best practices for workplace problems. In turn, DAU's faculty members continuously maintain exposure to real-world field techniques and issues. They can immediately infuse lessons learned into the DAU curricula. Our performance support effort now includes a rapid deployment training initiative. When policy changes, teams create new learning materials and place them in a digital repository within five days of the change. With this initiative, the workforce will have almost near real-time access to changes that affect their jobs. Learning products are available through various electronic media as well as through mobile training teams providing on-site instruction. (As one example, more than 12 members of the AT&L workforce received 18,000 hours of rapid deployment training within weeks of a new policy release.)

Continuous Learning Modules

DoD policy calls for the DoD AT&L workforce to operate as a continuous learning community. Members of the workforce are required to have 80 hours of continuous learning every two years.



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You've just finished reading an article in *Defense AT&L*, and you have something to add from your own experience. Or maybe you have an opposing viewpoint.

Don't keep it to yourself—share it with other *Defense AT&L* readers by sending a letter to the editor. We'll print your comments in our "From Our Readers" department and possibly ask the author to respond.

If you don't have time to write an entire article, a letter in *Defense AT&L* is a good way to get your point across to the acquisition, technology, and logistics workforce.

E-mail letters to the managing editor: judith.greig@dau.mil.

Defense AT&L reserves the right to edit letters for length and to refuse letters that are deemed unsuitable for publication.

In response to this, DAU formally launched the Continuous Learning Center (CLC) in July 2001. All modules in the CLC offer the workforce the opportunity to meet their continuous learning requirements while keeping abreast of current initiatives in acquisition. Since its launch, usage has increased tremendously. We now have190,578 cumulative accesses; 166,887 registered users; 106,750 completions of Continuous Learning Center Modules; and 456,423 contact hours.

Knowledge Sharing

The AT&L Knowledge Sharing System (AKSS) provides a comprehensive on-line reference repository, connections to knowledge communities, an Ask-a-Professor support function to answer questions from the workforce, and access online to documents and information retrieval services through DAU's David D. Acker Library. AKSS is the AT&L single gateway to knowledge sharing. Over 18,000 people per week visit and use this learning asset. The Acquisition Community Connection (ACC) is the collaborative arm of AKSS. Its knowledge sharing communities include interest areas, private workspaces, and DAU course communities. The ACC, which is available to the AT&L workforce on a 24-hour, seven-days-a-week basis, is an important function that helps the AT&L workforce discuss and solve problems and issues encountered in the field. Conversely, the lessons-learned from the contributions that subject matter experts make to the AKSS Web site contribute to the body of knowledge DAU faculty can use in building lessons and in the classroom. (***Editor's note**: For an in-depth description of AKSS, see "Knowledge Sharing System and Communities of Practice,"* PM Magazine*, Sept.-Dec. 2003, 14-20.*)

Acclaim for the AT&L PLM

The AT&L community is defined by its people and organizations. People have jobs and careers; organizations have missions. DAU supports both, enhancing the value added to the employees and value added to the corporation. Our workforce receives value in terms of their job performance, their career development, and intangibles such as intellectual exchanges. However, what ultimately makes the difference is the value that accrues to the organizations.

The PLM has delivered significant results—nearly one million hours accounting for a 104 percent growth in additional learning products to the workforce (see "Power of the PLM," page 50). On September 23, 2003, the achievement of the PLM was publicly recognized when, in competition with 189 other applicants, DAU received the Brandon Hall Gold Medal Award for Excellence in e-Learning Best Practices for the AT&L Performance Learning Model.

Editor's note: The authors welcome comments and questions. Hardy can be reached at christopher.hardy@dau.mil and McMichael at james.mcmichael@dau.mil.

Defense AT&L Writer's Guidelines in Brief

Purpose

The purpose of *Defense AT&L* magazine is to instruct members of the DoD acquisition, technology & logistics (AT&L) workforce and defense industry on policies, trends, legislation, senior leadership changes, events, and current thinking affecting program management and defense systems acquisition, and to disseminate other information pertinent to the professional development and education of the DoD Acquisition Workforce.

Subject Matter

We do print feature stories that include real people and events. Stories that appeal to our readers—who are senior military personnel, civilians, and defense industry professionals in the program management/acquisition business—are those taken from real-world experiences vs. pages of researched information. **We don't print** academic papers, fact sheets, technical papers, or white papers. We don't use endnotes or references in our articles. Manuscripts meeting these criteria are more suited for DAU's journal, *Defense Acquisition Review*.

Defense AT&L reserves the right to edit manuscripts for clarity, style, and length. Edited copy is cleared with the author before publication.

Length

Articles should be 2,000 - 3,000 words or about 10 double-spaced pages, each page having a 1-inch border on all sides. For articles that are significantly longer, please query first by sending an abstract.

Include a short biographical sketch of the author(s)—about 25 words—including current position and educational background.

Style

Good writing sounds like comfortable conversation. Write naturally and avoid stiltedness. Except for a rare change of pace, most sentences should be 25 words or less, and paragraphs should be six sentences. Avoid excessive use of capital letters. Be sure to define all acronyms. Consult "Tips for Authors" at <http://www.dau.mil/pubs/pm/articles.asp>.

Presentation

Manuscripts should be submitted as Microsoft Word files. Please use Times Roman or Courier 11 or 12 point. Double space your manuscript and do not use columns or any formatting other than bold, italics, and bullets. *Do not embed or import graphics into the document file*; they must be sent as separate files (see next section).

Graphics

We use figures, charts, and photographs (black and white or color). Photocopies of photographs are not acceptable. Include brief, numbered captions keyed to the figures and photographs. Include the source of the photograph. We publish no photographs or graphics from outside the DoD without written permission from the copyright owner. We do not guarantee the return of original photographs.

Digital files may be sent as e-mail attachments or mailed on zip disk(s) or CD. Each figure or chart must be saved as a separate file in the original software format in which it was created and must meet the following publication standards: color and greyscale (if possible); JPEG or TIF files sized to print no smaller than 3 x 5 inches at a minimum resolution of 300 pixels per inch; PowerPoint slides; EPS files generated from Illustrator (preferred) or Corel Draw. For other formats, provide program format as well as EPS file). Questions on graphics? Call (703) 805-4287, DSN 655-4287 or e-mail vaworkorders@dau.mil. Subject line: Defense AT&L graphics.

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Submission Dates

Issue	Author's Deadline
January-February	1 October
March-April	1 December
May-June	1 February
July-August	1 April
September-October	1 June
November-December	1 August

If the magazine fills before the author deadline, submissions are considered for the following issue.

Submission Procedures

Submit articles by e-mail to judith.greig@dau.mil or on disk to: DAU Press, ATTN: Judith Greig, 9820 Belvoir Rd., Suite 3, Fort Belvoir VA 22060-5565. Submissions must include the author's name, mailing address, office phone number (DSN and commercial), e-mail address, and fax number.

Receipt of your submission will be acknowledged in five working days. You will be notified of our publication decision in two to three weeks.

http://www.dau.mil/pubs/pm/articles.asp

Ten Rules For Success As A Manager

Wayne Turk

Recently a young man who had worked for me a few years ago called. He'd been promoted into a new management position and was looking for advice. He wanted to know if I had developed any "rules" for being a good manager. After over 30 years as a manager and management consultant, I have learned a lot—and not always from doing the right thing. I gave him ten rules that I've distilled from my experiences. They are certainly not original or all-inclusive, and none of these rules is absolute. As I told my caller, there will always be exceptions. Managers are chosen for their judgment—and that will inevitably mean knowing when to ignore the rules.

1. Hire good people.

Having good people makes being a successful manager easy. Be selective in whom you hire. Remember that personality and attitude are sometimes more important than experience or skills. If you inherit employees, even mediocre employees can be improved with patience, training, and effort on the manager's part—but it requires time and work.

2. Give them the tools that they need.

A carpenter can't build much without the right tools. The same goes for any employee. If it's a good computer and the right software—get it. If it is a certain piece of equipment—get it. Whatever they need (and I emphasize need, not want)—get it. Training is one of those tools. Make sure that your people are trained well. Frustration on the part of an employee who cannot do his or her job because of a lack of tools can destroy morale and productivity. It may cost money to get the tools and training, but it pays off in the end. Remember that a penny saved can cost you a dollar later. You may have to fight to get your people their tools, but it's a fight well worth engaging in.

NONE OF THESE RULES IS ABSOLUTE. MANAGERS ARE CHOSEN FOR THEIR JUDGMENT—AND THAT WILL INEVITABLY MEAN KNOWING WHEN TO IGNORE THE RULES.

Turk *is a retired Air Force lieutenant colonel and a project manager with SRA International, supporting a National Guard Bureau information technology project. He has supported projects for DoD, the military services, other federal agencies, and non-profit organizations.*

3. Tell them what you want done, not how to do it.

Tell your employees the results that you want, and get out of their way. Their way may not be how you would do it, but so what? Many times they will have better ideas about how to achieve the needed results than you would have. Listen to employee suggestions on how to do something or how to improve it. If they need help or guidance, give it to them. If they still can't or don't do the job, get rid of them. A nonproductive employee is a drain on resources, not to mention a negative impact on productivity and the morale of the other employees.

4. Set high expectations for employees and yourself.

People have a tendency to live up to—or down to—expectations. If you set high but reachable goals and share those expectations with your employees, they can attain them. The key is "reachable": when goals are unrealistic, many people have a tendency to give up before they ever get started. But don't set expectations too low. Sure, your employees will attain them, but it may not help you meet Rule 5.

5. The mission is first priority.

Getting the job done, and done right, has to be your top priority as a manager. That means knowing what the mission is, what the needed outcomes or results are, and how those results will be measured. Every manager has a boss, too. Most of the time, more than one. Getting the job done, meeting the boss's goals, and meeting—if not exceeding—the organization's expectations, should all mean getting the same results. Make sure that you know what those results are and find a way to reach them. If there is a conflict over what's expected, find a way to resolve it.

6. Plan, measure, and plan again.

Being without a plan is like driving somewhere new without a map. You may get to your destination in the end, but it will most likely not be by the best or most expeditious route. As part of your plan, you need some way to measure how you are progressing. Develop some metrics. Make sure that they are the right metrics and provide you with data that are both relevant and useful. Whether it's something as simple as checkmarks along a timeline or a more complex set of measures like earned value management, look at where you are compared to where you should be. Replan and adjust to make any necessary changes. Then begin the cycle again.

7. Take care of your people.

Taking care of your employees can encompass rules 2, 3, and 4. It means recognizing them when they do something good and correcting them when they do something bad. Do remember the old maxim, "Praise in public, correct in private." Let your people know when they do well, and do it in public, preferably in front of their peers and your boss. But take them behind closed doors or out of the work environment to talk about areas for improvement.

It also means rewarding employees in some way when they go above and beyond. Put people in for awards or recommend them for promotions or new jobs that will help them and the organization. It can be as little as a word of encouragement or "good job" noted on a document. If they know that you do these things, your employees will work hard for you. And when your people look good, whether it is to outsiders or others with the organization, you look good too.

8. Go Walkabout.

"Management by wandering" is a great way to find out what is really going on with your people, to see how they are doing and where the problems are. People are more willing to talk in their own space where they are more comfortable. If employees have to come to you, reality is that they rarely will. So walk around, but don't overdo it. If you take them away from doing their jobs or appear to be hovering, they will resent it and resent you.

9. Don't ask anybody to do things that you wouldn't do yourself.

That doesn't mean that you shouldn't ask employees to take on special projects or do other tasks that you as the manager can't do. It does mean *not* asking them to do personal things for you or things that are not a part of their jobs. Think before you ask an employee to do something. And be prepared to work overtime right along with them or work with them on tasks.

10. Communicate, communicate, communicate.

Communicate up the chain, with your peers, and with your employees. No one likes to hear bad news, but there's truth in the old saying: "Bad news does not get any better with age." Keep your boss informed of the good and the bad. Let him or her know what's happening, who's doing really good work, and who isn't. Communicate with your employees. Tell them what's going on, what changes are occurring, and why. It's failure to communicate that gets rumors started. The truth is always better, even if it is bad news.

"Knowledge itself is power," something Francis Bacon knew in the 16th century, holds just as true—if not more true—today. Knowledge is the new coin of the realm. If you share it, everyone benefits. It pays dividends to a manager to share knowledge, because other knowledge comes back.

Editor's note: The author welcomes comments and questions. Contact him at Wayne_Turk@sra.com.

Say Goodbye to the Old Ways of Doing Business

And Hello to the Business Management Modernization Program

Elizabeth A. McGrath

Each year the Department of Defense (DoD) spends billions of dollars designing, building, operating, and maintaining business systems for our troops. For decades, the military services and most DoD agencies and functional communities were permitted to develop and use their own unique business processes and systems; there was no requirement to adhere to a DoD-wide architecture or set of common standards. So many of the systems support one military service, a specific defense agency, or in some cases, an individual command.

Inevitably these independent systems could rarely interact with other systems, and their information could not easily be exchanged or aggregated for use by senior DoD leaders for decision making. Over the years, DoD business management systems have been unable to interact satisfactorily with one another and facilitate the synthesis of management processes; provide DoD decision makers with timely, accurate, and reliable information; fulfill all financial management laws, standards, and requirements; and produce auditable financial statements.

Genesis of the Business Management Modernization Program

In 2001, Secretary of Defense Rumsfeld and his leadership team realized the need to transform management processes and systems in all major business functional areas. To do this the Department created the Business Management Modernization Program (BMMP).

BMMP is a massive undertaking and will take several more years to complete. The program is centered around changing our business processes to achieve efficiencies, and in the process, eliminate redundant and noncompatible systems. BMMP will effect a transition from the current collection of predominantly incompatible and inadequate management systems to an integrated network of systems, based on the uniform implementation of requirements across the DoD.

Driving a Challenging Transformation

The Business Modernization and Systems Integration (BMSI) Office, under the under secretary of defense (comptroller), is the program office responsible for leading, coordinating, and integrating BMMP. The office is working to streamline, reengineer, and standardize DoD's business practices, not simply improve the handling of information.

We can't shut down the DoD for a decade, throw out all old business processes and systems, and start from scratch guided by a fully developed, comprehensive enterprise architecture. So the Department's task is to transform—without interrupting current business operations—an extraordinarily complex conglomeration of business systems and processes used to run our military and civilian operations day-to-day around the world. It's much like trying to change the tires on an automobile going 60 miles per hour. For this reason the Department selected a top-down, incremental approach. The sidebar on page 58, "BMMP Goals and Objectives," outlines how the BMMP will real-

McGrath *oversees transformation and modernization of DoD's business and financial processes and systems required to support decision-making at all levels throughout the Defense Department.*

ize its vision of managing the DoD in an efficient, business-like manner.

Evolution of the Business Enterprise Architecture and Transition Plan

The centerpiece of BMMP is the transformational tool known as the business enterprise architecture (BEA). The BEA is a blueprint to guide DoD's diverse business communities in transforming their processes and systems. It will describe the requirements that DoD business processes and systems must meet to achieve the goals of transformation. The initial version of the BEA got the program off to a strong start, but it will take several more versions to refine and extend the architecture until it fully describes the end state of successful business transformation—what we term the "to-be" environment. The BMSI office's aim is that each successive BEA version includes more of the detail needed to guide and complete the full transformation of DoD business processes and systems.

The FY 2003 National Defense Authorization Act requires the DoD comptroller to certify that system initiatives with obligations of more than $1 million are consistent with the Department's enterprise architecture and transition plan.

Besides refining and extending the BEA, the BMSI office is also aggressively building a comprehensive transition plan that provides a high level view of roles and responsibilities for implementing business and financial reform. The plan also depicts the migration strategy from the legacy systems environment to the new mix of systems needed to achieve DoD business transformation. The transition plan will guide the Department from its "as is" inefficient and ineffective environment to a "to-be" fully transformed state.

The Key: Strong Leadership Governance

The key to successful DoD business transformation is strong, integrated governance by the designated leaders or "owners" of six business areas called "domains"—Logistics; Acquisition; Installations and Environment; Human Resources Management; Accounting and Finance; Strategic Planning and Budgeting—as well as the Enterprise Information Environment (EIE) mission area. Each domain has a steering committee to carry out its oversight. The domain owners are:

- Logistics; Acquisition; and Installations and Environment—the under secretary of defense (acquisition, technology and logistics)
- Human Resources Management—the under secretary of defense (personnel and readiness)
- Accounting and Finance; Strategic Planning and Budgeting—the under secretary of defense (comptroller).

As part of the Department's global information grid (GIG), the assistant secretary of defense (networks and information integration)/chief information officer (ASD(NII)/CIO)) is the mission leader of the Enterprise Information Environment (EIE) mission area. This mission area represents the common, integrated computing-communications environment composed of equipment, software, and common information capabilities or services for GIG enterprise use.

At the Department level, the BMSI office reports on BMMP progress and issues to the BMMP steering committee, whose members include the principal deputies of the domain owners and the chief information officers, chief financial officers, and acquisition/logistics leads from each military service. The BMSI office also reports to the BMMP executive committee, whose members include three under secretaries of defense, the DoD chief information officer, and the under secretaries of the military services.

Portfolio Management and Controlling Investments

Domain owners are responsible for overseeing business transformation for their functional area of the military services and other DoD components. They will fulfill their responsibilities through what the Department terms "portfolio management." Under our portfolio management concept, domain owners will govern investments in information technology and process reengineering for their business areas.

At this stage in the Department's business transformation, domain owners are focusing on certain high priority requirements. Most notably, BMSI is focused on ensuring that our business systems support two critical requirements: obtaining an unqualified audit opinion on DoD financial statements, and attaining total asset visibility and achieving total force visibility. Using portfolio management, domain owners play the key role in ensuring that requirements, rules, and regulations are completely and consistently addressed in each system where they are relevant to these requirements. Domain owners are actively engaged in portfolio management as the department moves forward with the FY06 program objective memorandum (POM).

Section 1004 of the FY 2003 National Defense Authorization Act requires the DoD comptroller to certify that system initiatives with obligations of more than $1 million are consistent with the Department's enterprise architecture and transition plan. Domain owners are the key players in this certification. They ensure that initiatives within their domains are consistent with the current BEA version so that the high-priority DoD requirements are addressed consistently across the Department by each system as a prerequisite of obtaining funding support. The Department has already certified some new system initiatives with planned obligations of more than $1 million and is setting up the processes to thoroughly review, as required by law, all remaining systems planning to spend over $1 million.

Transformation is absolutely crucial to DoD's ability to enhance America's national security in this era of terrorism and uncertainty, where the speed, accuracy, interoperability, reliability, and dependability of our information resources are critical.

BMMP Goals and Objectives

GOAL 1

Provide timely, accurate, and reliable information for Business Management

Objectives

1.1 Achieve unqualified audit opinion on 2007 consolidated DoD financial statements

1.2 By 2007, achieve total visibility and accurate valuation of assets to include operating materials and supplies (OM&S); inventory; and Property, Plant, and Equipment (PP&E)

1.3 By 2007, achieve total personnel visibility to include military service members, civilian employees, military retirees, and other U.S. personnel in a theater of operations (including contractors and other federal employees)

1.4 Provide DoD decision makers with timely access to business information

GOAL 2

Enable improved Business Operations

Objectives

2.1 Adopt the Business Enterprise Architecture (BEA) for acquiring, managing, and providing materiel and personnel in support of the warfighter

2.2 Systematically enable efficiency and productivity improvements to DoD business operations

Domain owners will also have the lead in determining what business systems need to be phased out and when to do so to best complement the investment in new initiatives necessary to achieve our stated transformational goals.

A Functional Hybrid Final Solution

The critical role of domain owners underscores that the transformation of DoD business management will be functionally oriented. This means that if BMSI determines that the Department's business practices can be optimized by adopting a single system across the Department for a particular function, then we should do so. For example, all military personnel are governed by the same statutes, so DoD ought to have only one system to manage them, and that is, indeed, our plan. Travel is another

example where standardization will result in efficiencies in time and dollars across the Department. While transformation is not as straightforward when attempting to standardize current acquisition and logistics practices and systems, our goal is still a minimal number of systems necessary to achieve our mission goals and capabilities.

The military services have unique warfighting and support systems necessary to carry out their respective missions. These distinctive systems could eventually become fully integrated into a cohesive network of systems—either through modification to become consistent with the BEA, through adaptation of the requirement within the BEA, or through a combination of the two. Such integration is BMSI's goal. However, complete and absolute consistency across the Services is not practicable, given the varying mission requirements (for example, a system related to Navy's nuclear programs or its shipyard operations). We would still need to integrate these unique systems into our DoD network of systems. But we might do that by splicing into the network, rather than spending money to change a truly unique system.

In this sense, the Department's final transformed business management will be a hybrid. Many systems will be a streamlined, integrated solution developed through an end-to-end reengineering of a business process. But other systems might not be as elegant, having been developed through a combination of top-down and bottom-up work. And that is fine—we do not want to spend millions replacing older systems when they and the BEA can be adapted to integrate into a cohesive DoD network.

Under either type of solution, we expect significantly fewer business systems. Our BMMP aim is to rapidly identify and eliminate redundant systems and consolidate others. Legacy systems will be retained and accommodated only for compelling reasons (for example, because they are truly unique or because accommodating them is the most economical course).

A High-stakes Challenge

This transformation is as complex and difficult as any challenge the Department has faced. What is at stake is nothing less than the future quality and cost of DoD management of its hundreds of billions of dollars in assets, liabilities, and appropriations. Transformation is absolutely crucial to DoD's ability to enhance America's national security in this era of terrorism and uncertainty, where the speed, accuracy, interoperability, reliability, and dependability of our information resources are critical.

Editor's note: For more information visit <http://www.dod.mil/comptroller/bmmp/pages/index.html>.

DoD Mentor-Protégé Program

The Department's Small Business Incubator

Editor's note: Acting Under Secretary of Defense for Acquisition, Technology and Logistics Michael Wynne spoke on transformational goals at a general session of the 2004 DoD Mentor-Protégé Conference on March 16.

Wynne's remarks, presented below, focus on the direction of the Mentor-Protégé Program as led by Frank M. Ramos, director, Office of Small and Disadvantaged Business Utilization (SADBU) and on how Ramos, his staff, and all the DoD mentors and protégées can help support the five Joint Staff-directed functional capabilities to which the under secretary and his staff are committed: 1) battlespace awareness, 2) battlespace command and control, 3) force application, 4) protection, and 5) focused logistics.

It's a great thing to be at the annual Nunn-Perry Mentor-Protégé Awards Conference. I was involved with two small businesses and sure wish I had had a mentor. I think it would have been a great path to success for some and that it really represents a great path forward for small, innovative companies to be a success and learn our business—which is not easy. As Frank [Ramos] said, it might take a long time to get experienced enough to know you shouldn't have been in the business at all. But once in, it's really about patriotism and a lot of support and a lot of excitement that keeps you involved. I appreciate the fact that you all have, if you will, broached the door and come in. I welcome all of you—mentors, protégés, the DoD sponsors—to this great event.

Wynne is the acting under secretary of defense (acquisition, technology and logistics), Office of the Secretary of Defense, the Pentagon, Washington, D.C.

This truly is an important time to be involved with the defense of our nation, striving to ensure that its defenders get the right equipment to do their mission. Certainly the events of the past week are a grim reminder of what we're about. We share the grief for the people in Madrid, in Spain. It actually hardens our resolve in fighting off this attack on democracy, and in democracy's global war on terror. The common purpose extends beyond just the Department of Defense. It includes not only other government departments and agencies, but also American industry—companies large and small who together contribute to our common defense. This is why I wanted to address this annual gathering and am pleased to be here to do so.

Mentor-Protégé Program—DoD's Small Business Incubator

I see your collaborative effort as our Department of Defense small business incubator, although many of you are far beyond that and coming out of the incubator as if you are 10 feet tall. This innovative program nurtures and develops a relationship between large and small business. Dynamic partnerships not only help us meet our industrial base goals, they also directly support the secretary of defense's transformational agenda. That is what I'd like to focus on for the remainder of my remarks. This year's conference theme is "transforming America together through innovative technology."

Genesis of Transformation

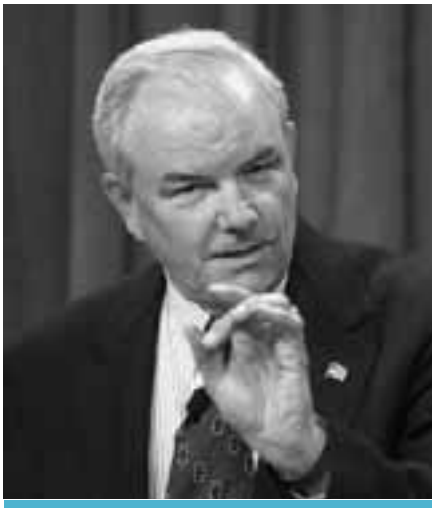
To put this theme in perspective, let me briefly describe the genesis of the transformation initiative. About five years ago, while he was still a candidate for the presidency, George W. Bush outlined his agenda for the defense of the United States in a speech at the Citadel military academy. He made, at that time, a commitment to missile defense. He talked about accelerating the capabilities of information age technology, making our forces more agile, more lethal, and more readily deployable. He emphasized precision over mass, innovation over tradition, and of course he acknowledged the threat by transnational terrorist groups as they were known then, and promised to engage our military establishment in countering them. In short, the president, at that time, as a candidate, challenged us to transform America's military, a transformation he further described as nothing less than the redefinition of war on our terms. Five years on, the

world is a drastically different place, with that division of our defense priorities having been proven to be largely helpful and extraordinarily prophetic. Allow me to highlight the changes that have occurred during this administration.

- We will in fact deploy the initial defensive operations capability in Alaska towards the end of this year. We in the Office of the Secretary of Defense along with the Joint Staff, have rewritten both the DoD 5000 and the Joint Staff's 3170, which are really the rules on requirements definition and the growth to and in program management. Joint interoperability is now the gold standard for the Defense Acquisition Board's review process.

- The Office of the Secretary of Defense and the Office of the Joint Chiefs of Staff are restructuring the management of logistics in a major way to speed the acquisition and flow of goods from America outbound to our Services. We have embraced (both Defense Logistics Agency and the Transportation Command) focused logistics within the Services for all inbound/outbound goods and services.

- I've saved the most obvious change since 1999 for last, but it is by no means the least important. In fact, it is absolutely paramount to our transformation. Our American fighting forces and the members of our coalition supporting the global war on terrorism are deployed in combat operations around the world now and will be for the foreseeable future.



Small innovative suppliers are the key to strengthening the industrial base and broadening the array of defense suppliers.

Small Steps, Medium Jumps, a Few Big Bets

In light of the clarity of this mission, the Joint Staff has decided on five functional capabilities that our forces must have in order to deliver operational effects: battlespace awareness, battlespace command and control, force application, force protection, and focused logistics. The Department is using these five capabilities to build a single integrated framework of operational concepts, requirements, systems interfaces, and systems architectures. We see ourselves transforming to these capabilities through many continuous small steps, some medium jumps, and a few of what retired Defense Transformation Director Admiral Art Cebrowski calls "big bets." Our understanding of this new strategic environment tells us that the big bets are not options. If you're not making any, then you're a targeted risk in the future.

In essence, this is what *netcentricity*—our framework for network-centric warfare—is all about. We see it characterized by high rates of change, closely coupled events, lock in and lock out, and speed of command. In this framework, it pays you to pay attention to what we now value within the Department as we bring programs into the studies and analysis area.

What Does DoD Value?

First, maneuver. Second, sensing. Third, envelope management, which merely means a little bit of watching out for collateral damage and making sure that your envelope, in fact, is what you want. Speed coupled with endurance; numbers in the sense of reliability statistics. How can we keep down the force structure that is involved? How can we keep the numbers of our fighters to a minimum? A higher degree of risk tolerance—some of which you saw in Operation Iraqi Freedom—and then networking in a very different way from the way that networking might have been known pre-1999.

Net-centric communications really means sharing information. In fact, what we really are changing from is sort of a *permission* to share to a *need* to share. That means that where we used to study our defenses and be very careful about how our information was collected and protected, we now have a need to share that information as fast as possible, process it, and share it once again. It's a very different approach, and it is frankly driving our security folks a little bit nuts. But the fact is, operations trumps security many, many times.

What Defense Transformation Looks Like

Admiral Cebrowski has also put out some thoughts about what the evidence of transformation looks like. In fact, I heard a good word the other day, which is "transfor-metrics." How do you "metrify" what you're trying to achieve? Because you know if you can put metrics to it, then you can manage it. Art [Cebrowski] is searching/reaching for the evidence of transformation. How is it devolving into our culture? I think his organization is off to a good start in helping us recognize transformation when we see it.

2004 NUN

Nancy Spruill Joins SADBU

Dr. Nancy Spruill (below left), director, Acquisition Resources & Analysis, OUSD(AT&L), joins Frank Ramos (below right), director, Small and Disadvantaged Business Utilization (SADBU) in honoring 11 teams at the 2004 Nunn-Perry Awards presentation on March 17 in Alexandria, Va. The Nunn-Perry awards provide incentives for major DoD prime contractors—"Mentors"—to help "Protégés"—small disadvantaged businesses, women-owned businesses, and qualified organizations that employ the severely disabled. Recipients of the Nunn-Perry Award are selected on the basis of each mentor-protégé team's success in achieving cost-efficiencies, enhancing the protégé's technical capabilities, and increasing new business opportunities for prime contracts and subcontracts within the DoD.

In addition to recognizing Nunn-Perry Award winning teams, the 2004 DoD Mentor-Protégé Conference focused on "Mentors and Protégés: Transforming America Together through Innovative Technology." Attendees included directors from the military services and other defense agencies, SADBU offices, program managers, other government personnel, and key large and small defense contractors. Keynote speakers included Acting Under Secretary of Defense for Acquisition, Technology and Logistics Michael Wynne; Congressman Howard P. "Buck" McKeon (R-Calif.); Director, International Affairs, Department of Homeland Security Cresencio "Cris" Arcos; and Ramos.

Mentor—AMEC Earth & Environmental Inc.
Protégé—Zambrana Engineering Inc.

Mentor—IBM Corporation
Protégé—Communication Technology, Inc.

Mentor—Northrop Grumman Mission Systems
Protégé—Computer & Hi-tech Management, Inc.

Mentor—Shaw Environmental, Inc.
Protégé—ADVENT Environmental, Inc.

Mentor—Tetra Tech, Inc.
Protégé—EM-Assist

Photos by Richard Mattox

N-PERRY AWARDS

Director in Honoring 11 Exceptional Mentor-Protégé Teams

Mentor—The Boeing Company
Protégé—Precision Machine & Manufacturing Company

Mentor—Electronic Data Systems
Protégé—APT, LLC

Mentor—Raytheon Company
Protégé—MIRATEK Corporation

Mentor—Science Applications International Corporation
Protégé—Houston Associates, Inc.

Mentor—Tetra Tech EM, Inc.
Protégé—Sullivan Consulting Group

Mentor—Science Applications International Corporation
Protégé—GEO Consultants, LLC

It's a little bit like quality—knowing quality when you see it, but being unable to judge without difficulty what the metrics are for achieving it.

First is an increase in our capability to dominate in the sensor war. Second, a compressed and seamlessly integrated cycle for planning, organizing, deploying, employing, and sustaining our United States forces overseas. We have new command structures emerging that leverage network capabilities. We have an information advantage that has been turned into a competitive advantage against stated enemies called "decision superiority." We now talk about things like information advantage, decision superiority, and closing in on the information paradigm. We also talk about radically reducing the logistics demands of our deployed forces through increases in reliability, and frankly, better use of our precision capability, and a good look at bomb damage assessment and/or battle damage assessment. We've created some concepts and capabilities to determine how to operationalize (i.e., fight) a little bit better once we have information superiority. There was always a sort of hesitation of "Is it real?" I think that as we develop a little bit more trust in our networks, we see it as being real and we can now fight it. The companies that understand not just the five functional capabilities, but the criticality of having that single integrated framework—and that are nimble enough to provide us enough of the products that enable the single integrated framework—are going to get the Department's attention.

I challenge you, the Mentor-Protégé participants, to bring innovative solutions for our most pressing problems. Every day we search for technology or practical solutions to save lives for both our military and civilians around the world. I'd ask for your assistance in that regard.

Big Think vs. Big Dollars

I have told the Joint Staff, Joint Forces Command, and our Service staffs that the greatest challenge of our military transformation is that of battlespace integration, and now I'm telling you. In this area, more than any other lie both challenge and opportunity. The challenge now requiring a solution soon is to achieve a true joint battlespace management architecture. It is perhaps the single most vital warfighting technology for our military transformation. It isn't the big dollars. It's the "big think" that's affecting us now. It's a big change when you think about it. We used to do big dollars and now we're forcing ourselves to do big think. It's a radical change.

One of the things that's interesting about it is that it really doesn't cost a lot of money to accomplish this part of transformation. It's a bit like asking the question though, when the ancient Romans were formed into their phalanxes—nobody gave them better sticks. They just formed into better phalanxes and were able to defeat horse-drawn infantry. Same thing goes in a lot of our cultural transformation. In fact, in the German *blitzkrieg*, you don't fully realize that less than 10 percent of the German forces were truly modernized. But that 10 percent and their employment was the major difference in the German thrust early in World War II. Going away from the big thing to the big think is a big deal. It's something that you must realize.

Mentor-Protégé—an Industrial Base Tool

Achieving a true joint battlespace management architecture is vital to where we're going. In this regard, Frank [Ramos] and I have discussed and agreed to incorporate the Mentor-Protégé Program as an industrial base tool to mutually complement the small business innovative research and the small business technology transfer programs, better known as the SBIR and the STTR programs. These programs represent more than a billion dollars, and this effort has a lot of potential to get the attention of the Department. Alignment of the Mentor-Protégé Program, which is a development program, with the SBIR and STTR programs and the technologies associated with them, should produce more stable, high-technology businesses that respond to the functional capabilities and the new laydown for the acquisition programs in the Department of Defense.

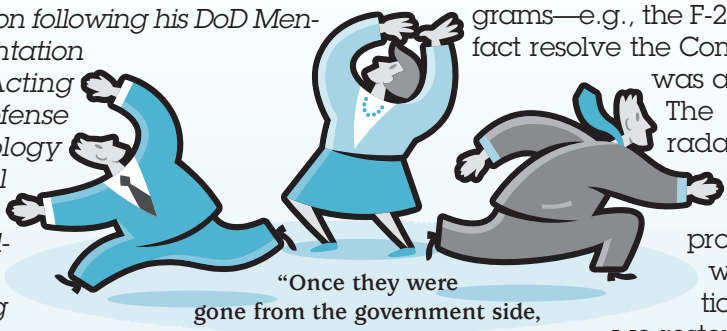
The concept of aligning these programs would further ensure that investment objectives are better realized and that our industrial base would be strengthened. Aligning these programs will enhance synergy between the programs and allow Frank Ramos, the director of the small business program office here, to better analyze how the Mentor-Protégé Program can best address the critical needs of the Department of Defense. This innovative approach will help us meet some major initiatives we've launched inside the acquisition, technology, and logistics function. We think they're going to affect the defense industry, but I need all of your help to meet these important challenges.

In closing, I want to take this moment to personally congratulate all of the Nunn-Perry awardees for their small business contribution toward our nation's defense. Your efforts are both praiseworthy and greatly appreciated. I commend the military services and the other defense agencies for sponsoring exceptional mentor-protégé partners. Together, small and large businesses will continue to help transform America's military and keep us strong well into the future. Thank you very much for coming. Thank you very much for listening. And God Bless America.

Editor's note: To learn more about the DoD Mentor-Protégé Program, visit their Web site at < http://www.acq.osd.mil/sadbu/mentor_protege > .

Wynne Explains Increased Emphasis on Systems Engineering in the DoD Acquisition Process

During a Q&A session following his DoD Mentor-Protégé presentation on March 16, Acting Under Secretary of Defense (Acquisition, Technology and Logistics) Michael Wynne was asked about his views regarding renewed emphasis on systems engineering in the acquisition process—a topic of increasing emphasis throughout today's DoD Acquisition Workforce.



"Once they were gone from the government side, they (systems engineering personnel) began to disappear as well from our contractor community."

"I came into the office of the under secretary very troubled—troubled about systems engineering. What I've seen over the course of the time I've been here is that we had a stark revolution either in the late '80s, early '90s, where it was determined that the systems engineers are basically 'greybeards' who ask tough questions of program managers. As we all developed into Type A personalities, we decided that they were not as valuable as they could be. Most of the Type A personalities have a plan, execute the plan, get to the next plan, and then execute that plan without regard to how they might bump into each other. This is the role of systems engineering.

We (DoD) also at the same time had a tremendous reduction in the acquisition workforce—roughly 40-50 percent. Most of those individuals on the defense side—on the government side—turned out to be people associated with systems engineering. It created a real problem because once they were gone from the government side, they began to disappear as well from our contractor community.

A third wave that has occurred is the federally funded research and development centers (FFRDCs)—Mitre, Aerospace, RAND—all experienced reductions in the number of people that they could put on (research and development programs). So here we laid off people inside the government; we had people outside the government under pressure. Where could people turn for systems engineering analysis? It became very difficult.

Now, not to my surprise but as I analyze things, we're running into problems with our major programs—e.g., the F-22 integration. We did in fact resolve the Comanche problem, but it was an *integration* problem. The space-based infrared radar system. Problem? Integration. These are all systems engineering problems, so this is a long way to answer your question, but my vision is that we restore systems engineering philosophies and the disciplines that are associated with them. I've asked for the systems engineering master plan to be a part now of program generations so that we'll understand what discipline is required to bring this about.

I think there's been a total resurgence around the community in recognition of the fact that we've let things go too far. Ours is kind of a pendulum society. We see things as too dramatically over on this side; we begin to swing it back and before you can stop it, it's through the center and off to the other side. I think we got through that other side and we didn't like that either. So maybe we had a little too much oversight, but now we have too little. That's my vision of systems engineering—to essentially restore the disciplines that I think have brought us great programs.

The Missile Defense Agency has an example of a marvelous systems engineering approach. Now they did it, by the way, by declaring a national need and assembling quite a few brains that they call the 'national team,' which really is almost a not-for-profit that's been contributed by all of the major players. Their sole role is to advise, provide advice, and sole counsel to the program office in the way that we should have had all along inside the program office. I really do appreciate the laydown that they showed me because I asked them and demanded, 'How are you doing this?' because it really is a very complex program. I also sent folks over to look at their software programs, to do an audit, to see if they were good. Turns out the systems engineering master plan flowed right into their software development. I think if we had implemented that, we would have had a lot easier time in some of our other programs. That's where we're headed. Thanks for your question."

AMERICAN FORCES PRESS SERVICE
JOINTNESS VITAL IN TRANSFORMING TRAINING (MARCH 3, 2004)

K.L. Vantran

WASHINGTON—Transforming joint training in the Defense Department is a continual journey, Paul W. Mayberry, deputy undersecretary of defense for readiness, said at the Defense Transformation Efforts and Opportunities Conference here last week.

"We are a nation at war," he said. "Because of our successes in these theaters, some have questioned the need to transform, but in fact it is the conditions from these wars that have only reinforced our necessity to transform the way that we train.

"Today's world is complex and filled with uncertainty and surprise," he added. "We no longer fight against known enemies with standing armies, but rather against faceless networks of terrorists. These adversaries try to exploit our weaknesses and they're agile enough to change their tactics on a daily basis."

Today's training, said Mayberry, must train commanders and staff at the strategic, operational, and tactical levels. "We must train forces from top to bottom," he said. "(Forces) must be able to adapt plans and structures even while en route to theater. We must deliver training on demand as opposed to according to pre-set schedules."

The challenge and fundamental question, said Mayberry, is "How do we prepare our forces to be successful under arduous conditions against both known and unknown threats often operating in non-traditional environments and employing tactics that morph daily?"

Mayberry said capabilities-based training is the cornerstone for training transformation. "We cannot prepare for everything; we cannot do it all," he said. "We must have fundamental training systems that are sufficiently dynamic as well as responsive to changing and emerging requirements. (We) also have to be able to prepare and deliver our forces anywhere and any time."

Three new joint capabilities support the training transformation vision: Joint Knowledge Development and Distribution Capability, Joint National Training Capability, and Joint Assessment and Enabling Capability.

The Joint Knowledge Development and Distribution Capability must be able to address "lifelong learning needs of the total force," said Mayberry. "Our leaders must think intuitively 'joint.' They must be 'joint' earlier in their careers. We must try to achieve a mindset of being 'born joint.'"

It also is important to prepare forces collectively, said Mayberry. "We need to build a robust, live, virtual, and constructive training environment that will provide training at the tactical as well as operational levels of war." The JNTC seeks to leverage the experiences and excellences of the Services' major training centers, he added.

"(There is a) need to focus on measurement—to understand what we have done," continued Mayberry. "Are we, in fact, having capabilities that will enable success? What is the return on our investment? Are we truly being transformational, or are we just simply re-labeling things that we had on the books?" This, he added, is the focus of the Joint Assessment and Enabling Capability. The goal is to enhance and measure joint performance, said Mayberry.

"Our ability to train and educate must be focused on the ultimate customer—the combatant commander," he added. "(We must) provide an adaptability that will allow us to quickly turn to different and emerging training requirements."

AMERICAN FORCES PRESS SERVICE (MARCH 22, 2004)
PARTNERSHIP INTEGRATES, IMPROVES COMBAT SUPPLY SYSTEM

Gerry J. Gilmore

WASHINGTON—The Defense Department's top transportation and supply organizations have joined forces to fix a combat supply system that at times didn't perform well during Operation Iraqi Freedom.

As U.S. and coalition forces raced toward Baghdad last year, some units reportedly experienced a shortage of "bullets and beans"—an alarming state of affairs in the deadly serious business of waging war.

The overseas logistics problems have been fixed, in part, through application of more integrated communications between supply procurers, transporters, and customers, two senior military logisticians told journalists during a March 18 press conference at Defense Logistics Agency headquarters at Fort Belvoir, Va.

Transformation of the U.S. military's transportation and supply systems was well under way before Operation

Iraqi Freedom, explained Army Maj. Gen. Robert T. Dail, director of operations at U.S. Transportation Command headquarters at Scott Air Force Base, Ill. Dail, who was in Illinois, participated in the joint DLA-TRANSCOM press briefing through video-teleconference technology.

Today's use of radio-frequency-identification-tagged supplies, Dail pointed out, has improved the tracking of shipped supplies and reduced logistics confusion. During the Persian Gulf War more than a decade ago, many crated goods shipped to Kuwait had to first be opened to determine what they contained before being sent to front-line units.

However, Dail said, the recently fought Iraq War revealed communication problems between front-line combat units and their rear-line suppliers. Better integration across the supply and transport chains was needed, the general said.

Before and during the recent Afghanistan and Iraq conflicts, DoD policy called for TRANSCOM to deliver supplies and troops into overseas combat theaters, leaving responsibility to reorder and transport supplies for front-line units to combat commanders, Dail said.

"We would turn that (responsibility) over to a combatant commander," Dail explained, "and he would take care of the onward movement and supply of those forces." In Iraq, though, that system was sometimes found wanting, and the Army launched a 'white paper' investigation into the matter.

"What we have now is a rigid (logistics) support system that does not work well in a flexible, changing environment," Army Lt. Gen. Claude V. Christianson, the Army Staff's logistics chief, noted in an article published in the Jan. 15 issue of *Aviation Week's* "Net Defense."

Addressing digital communicators at a conference here Jan. 21, retired Navy Vice Adm. Arthur K. Cebrowski, director of the Pentagon's Office of Force Transformation, noted that supply problems in Iraq resulted, in part, because logisticians use separate information and command and control systems apart from those that warfighters use. "The fact of the matter is that there is dysfunction from both of those things, and that has to change," Cebrowski, DoD's chief transformation proponent, declared.

As part of initiatives to improve the military's supply system, Dail said TRANSCOM was designated as DoD's overall supply distribution process manager. TRANSCOM, Dail said, promptly formed a partnership with DLA, and logistics technicians were sent to join forward-deployed division headquarters staffs. Now, Dail explained, "We have deployed our experts into overseas areas, armed with information technology—the latest in (logistics management) systems—and they are providing a real-time visibility of the requirements that our military members need to support their operations overseas."

That change, Dail asserted, has produced "a tremendous improvement" in how the military provides supplies and services to deployed soldiers, sailors, airmen, and Marines.

"No longer are we just looking from the national level at providing forces and delivering goods to overseas airports and seaports," Dail noted, "but now, we're looking at delivering them and tracking them all the way to forward locations, and northern locations in Iraq, far-forward locations in Afghanistan."

Army Maj. Gen. Daniel G. Mongeon, director of DLA's logistics operations, echoed Dail's assertions during the press briefing, noting the DLA-TRANSCOM partnership "brings together complementary capabilities and skills essential to effectively and efficiently supporting our military services."

The Army, Navy, Marines, Air Force, and Coast Guard, Mongeon noted, "rely on DLA to provide a huge variety of items," including food, fuel, medical supplies, clothing, construction materials, and more than 90 percent of weapon systems repair parts.

In mid-January, a Deployment and Distribution Operations Center (DDOC) was set up in Kuwait to facilitate U.S. Central Command's supply and personnel distribution systems, Mongeon noted. Army Brig. Gen. John C. Levasseur, director of DLA's reserve mobilization office, left for Kuwait in February to assume directorship of the DDOC from Air Force Brig. Gen. Brad Baker. And, Mongeon said DLA plans to establish a forward-deployed supply depot to better support and improve CENTCOM's logistics operations.

The partnership with "supply-chain integrator" DLA, Dail pointed out, leverages TRANSCOM's "awesome capability" to deliver forces and material around the globe, armed with greatest and latest information technologies to support our professionals.

ARMY NEWS SERVICE (MARCH 24, 2004)

TRANSFORMATION ON TRACK, ARMY LEADERS TELL SENATORS

Spc. Lorie Jewell , USA

WASHINGTON—Senior Army leaders gave emphatic assurances that efforts to transform the Army and properly equip the current force fighting in Iraq and Afghanistan are at top speed during their recent testimony to the Senate Armed Services' Subcommittee on Airland.

Sens. Jeff Sessions (R-Ala.) and Joseph Lieberman (D-Conn.) said that while they support the Army's transformation plans, they are concerned about the cost of developing future combat systems while concurrently restructuring and modernizing the current force.

"I am concerned that current operations will create resource challenges that can adversely affect transformation,'' Sessions said.

Claude Bolton Jr., assistant secretary of the Army for acquisition, logistics and technology, said the money being spent on changing the current force into a future force is closely managed. Leaders are mindful of the need to strike a balance between what they need for the future and current needs with available resources, Bolton said.

Bolton added that since he took his position three years ago, 30 programs have been cut.

"I think we've done that well, based upon feedback I've gotten from the Congress, industry, and the Army,'' Bolton said. "And that is to put funds where we need it for the current force as well as the future force."

Army vice chief of staff Gen. George Casey acknowledged "the pendulum has swung" from the future back to the current, but stressed that Army leaders are planning and implementing change with minds focused on maintaining program stability for the future combat systems. He added that the Army fully intends to stick to its budget.

With all of the activity going on—325,000 soldiers deployed in 120 countries combined with the mobilization of more than 150,000 National Guard and Army Reserve soldiers, Casey said it may not seem like the best time to undertake fundamental change across the Army.

"But we think it's just the opposite,'' Casey said. "It's an opportunity we can't pass up."

The Army is working toward three main goals, Casey said: reduce stresses on the force, improve capabilities, and transform into a more versatile, agile, joint, and expeditionary force in the current decade.

The major initiatives to make that happen, he added, are rebalancing the active and reserve component forces to improve strategic flexibility; reorganizing combat formations into modular brigade-based units to improve self-sufficiency and facilitate force packaging; and a force stabilization program to increase unit readiness, reduce personnel turbulence and make life more predictable for soldiers, units, and families.

"What we are doing now, we intend to set us up for the future force," Casey said.

Casey said the fiscal year 2005 budget request will give combatant commanders the land power capabilities they need to fight the global war on terror, facilitate homeland defense, and continue to meet worldwide commitments. It also covers the transformation program, base operations, and 15 critical recapitalization systems. The budget request does not fund ongoing missions in Iraq and Afghanistan or recovery from those missions, the general added.

Lieberman said he is worried the cost factor won't allow the Army to do everything it's aiming for. He noted that while the Army received $42 billion of the $65 billion in fiscal year 2004 supplemental appropriations, it still had to deal with close to $3 billion in war-related requirements that were not funded. In the Army's fiscal year 2005 budget request, the unfunded priorities list totals $6 billion, which includes $2.4 billion for modularity requirements and $1.2 billion for fiscal year 2004 reset shortfalls, Lieberman said.

Additionally, Lieberman said he has heard estimates of nearly $50 billion for the Army's expected supplemental request for fiscal year 2005.

"The resultant shortfall could have a serious impact again on Army transformation funding in the future," Lieberman said, "and potentially force the Army to delay, or at worst, terminate the future combat systems in order to meet current force requirements."

Bolton said the Army is responding quickly to meet current needs, namely making sure soldiers have the best protection, equipment, and technology available to fight the enemy.

As an example, soldiers in Afghanistan and Iraq now have special inserts called SAPI (Small Arms Protective Inserts) plates that go into their flak vests for added protection. Just over a year ago, the Army was getting about 8,700 sets a month. By April 2003, monthly production more than doubled to 19,000. Current production is at 25,000 sets per month, with a total of more than 163,000 in theater. The goal is 840,000 sets, Bolton said.

Along with that, production of new up-armored Humvees stood at 20 to 30 vehicles a year ago. That number currently stands at 185 per month, with production expected to rise to 220 by May. Officials expect to have 4,149 of the vehicles, with the intention of continuing production to reach 5,000 in theater, Bolton said.

The rapid fielding initiative equipped 27,000 soldiers last year with arm and kneepads, and different sights for night vision and weapons. This year, 120,000 soldiers will get them, Bolton said.

Resource shortfalls are not putting the Army behind in moving forward with future force plans, Bolton stressed, describing the Future Combat System as the most complex undertaking the Defense Department has ever done. In breadth of scope, he compared it to the Manhattan Project in the 1940s and the space program of the 1960s.

The Future Combat System will include unmanned vehicles on the ground and in the air; mobile robots with arms that can fire mortars; a non-line-of-sight cannon; lighter vehicles that can fit into a C-130 cargo plane; and blue force tracking—the ability to network sensors from all of those items to give soldiers the ability to know where the enemy is and what it's doing.

Some of that is already being used to some degree, the leaders said. The Stryker infantry carriers, on the ground now in Iraq, can be transported in the C-130. One of the first things done in Afghanistan to reduce risk to soldiers, Bolton said, was to put robots with Web cams in caves to show whether there were weapons inside. Another advancement was finding a way to open locks without breaking them while searching Afghan homes for weapons, reducing burdens on citizens who could not afford to replace locks in the event no weapons were found.

The subcommittee, to include Sens. Elizabeth Dole (R-N.C.) and Hillary Clinton (D-N.Y.), also heard from Maj. Gen. John Curran. He directs the Futures Center, the lead agent on developing the Army's future force. Work there enables soldiers to fight better by identifying gaps in capabilities and when possible, infusing—or "spiraling"—future abilities into the current force.

While much of the scope of the center's work involves reorganization, equipment, weapon systems, technology, and a joint mindset, Curran stressed that the soldier is at the forefront of planning and research.

"The human dimension is and will remain the most critical dimension of war," Curran said. "The soldier is indispensable to the joint team. When we enhance the soldier's lethality, protection, and situational awareness, we enable individual initiative and competence to win battles, wars, and peace."

In the interest of beefing up protection for soldiers, Bolton said the Army has engaged industry and academic types to develop a body suit made of material stronger than Kevlar and about as thick as a shirt. Researchers recently tested one of the prototypes—with the thickness of about two shirts—by stabbing it as hard as possible with an ice pick. With normal Kevlar, the ice pick goes through it, Bolton said—but it did not penetrate the tested material.

"It won't give 100 percent against all threats, but I think it will greatly reduce some of the problems and injuries we've had," Bolton said.

AMERICAN FORCES PRESS SERVICE (MARCH 25, 2004)

LAND WARRIOR SYSTEM TO IMPROVE SOLDIER'S ABILITY ON BATTLEFIELD

K.L. Vantran

WASHINGTON—Although the complete Land Warrior System—a modular, integrated fighting system that includes everything an infantry soldier wears or carries on the battlefield—is not due to be fielded until 2007, troops in the field already benefit from several of its components.

The goal of Land Warrior, said Army Col. Ted Johnson, project manager for Soldier Warrior, Program Executive Office Soldier at Fort Belvoir, Va., is to improve a soldier's ability on the battlefield. This, he added, includes enhancing a soldier's mobility, situational awareness (command and control and communications), lethality, sustainability, and survivability.

The original intent, said the colonel, was for Land Warrior to be fielded as a head-to-toe system, but that process has changed.

"A lot of it has to do with 9/11 and the advent of combat operations (in Iraq and Afghanistan)," said Johnson. "What we're doing now is spiraling out individual things if we can. If something is ready now, we'll get it to the force."

Examples include personal protection body armor, lighter-weight helmets, and the commander's digital assistant, which provides situational awareness and mission planning capabilities.

"The close fight can now be prosecuted without worrying about having all small-unit members within sight or shouting distance," said Johnson. "(With the CDA) they know where they're going, they know where you are, and you know where they are."

One of the system's achievements, said Army Lt. Col. Dave Gallop, product manager for Land Warrior, is how it has been leveraged to Stryker Force capabilities. The Stryker, the combat vehicle for the Army's interim brigade combat teams, is a highly deployable, wheeled armored vehicle that combines firepower, battlefield mobility, survivability and versatility, with reduced logistics requirements.

"We've optimized Land Warrior for Stryker operations," Gallop said. "It can do operations away from the Stryker, but it's at its peak performance when it is working based out of a Stryker."

While the Land Warrior System has proven its functionality, the challenge is making the system rugged enough to sustain the rigors of battlefield operations, Johnson said

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"(You) have to make sure the cables and connectors you design are able to handle the stresses and strains of the 180-pound, 19-year-old private who is busting down doors, taking prisoners, getting in and out of combat vehicles, rolling in the dirt, falling into the dyke, and scrambling up the other side soaking wet," said Johnson.

"The challenge is making the system rugged enough, reliable enough, durable enough to be out there in the streets of Baghdad, or in the hills of Afghanistan in January with two feet of snow, or in Haiti with the humidity and mugginess."

A prototype for the Land Warrior System is scheduled for testing in October.

Land Warrior with XM8 Carbine Compact Configuration. On the ground, the Land Warrior system improves individual soldier battle command and tactical awareness, reduces fratricide incidents among individual soldiers, and integrates the soldier into the digital battlefield.

Photo courtesy PEO Soldier

Editor's note: For more information on PEO Soldier, see the May-June 2004 issue of *Defense AT&L*, "The Soldier—America's Most Deployed Combat System," p. 2.

AIR FORCE PRINT NEWS (MARCH 26, 2004)
JOINT STRIKE FIGHTER UNDER ATTACK ON CAPITOL HILL

Master Sgt. Scott Elliott, USAF

WASHINGTON—A senior Air Force official told lawmakers March 25 that the Service would not be interested in the F-35 Joint Strike Fighter if a technical glitch could not be overcome or if program funds were cut off.

Lt. Gen. Ronald E. Keys, deputy chief of staff for air and space operations, bluntly told members of the House Armed Services Committee subcommittee on tactical air and land forces, "If we can't build it, we're not going to buy it."

The general's comment came in response to subcommittee chairman Rep. Curt Weldon's question about Secretary of the Air Force Dr. James G. Roche's testimony March 24 before the Senate Committee on Appropriations subcommittee on defense.

In referring to chronic weight problems with the short takeoff and vertical landing (STOVL) version of the JSF, the secretary said, "…(R)isk reduction on the STOVL becomes one of the paramount things to do… because if we cannot build the STOVL aircraft, then we really cannot proceed with the F-35 program."

Being overweight is especially troublesome for the close-air support variant of the F-35, because its primary feature is the short takeoff and vertical landing capability. The STOVL JSF uses a shaft-driven lift fan propulsion system that allows the aircraft to hover and land like a helicopter.

Lockheed Martin originally contracted with the U.S. Marine Corps to build the STOVL variant of the F-35 to replace the AV-8B Harrier. The Air Force will take over the program in June, as part of the Service's commitment to improving close-air support, officials said.

"If it doesn't meet specifications, I don't think my Marine colleagues would be interested in an airplane that wouldn't meet their qualifications," General Keys said.

While Secretary Roche did acknowledge concern over the JSF's weight problem, he also said the problem was to be expected—it is in only the second year of an 11-year development program.

"Is the weight a terminal problem? We don't think so, but because it most severely affects the short takeoff and landing, we believe it's prudent and right, and our responsibility, to work the problem," Secretary Roche said in his previous testimony.

John J. Young Jr., assistant secretary of the Navy for research, development and acquisition, agreed.

"There is nothing we see that says the JSF will not work," he said. "The JSF enables concepts of operations that none of today's legacy aircraft can accomplish."

The JSF is expected to fly and fight into the 2040 to 2050 timeframe. Mr. Young said that without the JSF, the Services would be forced to fly 1980s-era technology for another 50 years.

Air Force Lt. Gen. Ronald E. Keys answers questions about the state of the F/A-22 and Joint Strike Fighter programs during a hearing of the House Armed Services Committee subcommittee on tactical air and land forces March 25. He is the deputy chief of staff for air and space operations.
Photo by Master Sgt. Jim Varhegyi, USAF

Even if the JSF can beat the weight problem, Representative Weldon said the plane might not be out of danger. Extreme competition for defense budget dollars may force Congress to ask the Service to choose between the JSF and the F/A-22 Raptor.

Several Raptors have already been delivered to the Air Force and are undergoing rigorous flight and system tests. In one recent test, four Raptors engaged eight F-15 Eagles in simulated combat. General Keys said the Raptors cleared the sky of F-15s before many of the Eagles could even get off a shot.

"The F/A-22 is a reality…it is not, to use an expression, a viewgraph presentation," said Dr. Marvin R. Sambur, assistant secretary of the Air Force for acquisition. "The F/A-22 is here, but we're not pulling away from our commitment to the JSF."

Representative Weldon said the Service might not have a choice.

"If financial pressure in tactical aviation continues to grow the way it has, something's got to give," he said. "The most likely candidate, if you look at political pressure, will be something that doesn't exist yet."

Dr. Sambur told the lawmakers that despite the growing cost and lengthy research and development time, it would be impossible to choose one system over the other because both aircraft are essential to America's future military operations.

"You've given us the choice of cutting off our right arm or cutting off our left arm," he said. "I want to make sure you understand that the F/A-22 and the JSF are complementary…and they are both needed. We are committed in the Air Force to both planes."

AMERICAN FORCES PRESS SERVICE (MARCH 29, 2004)

SCIENTIFIC INNOVATIONS SERVE TROOPS TODAY, TOMORROW

Gerry J. Gilmore

WASHINGTON—Scientific innovations developed by the Defense Department and in the private sector are helping to prosecute the war on terrorism in Afghanistan and Iraq while helping DoD to realize its transformation goals for tomorrow.

DoD research conducted over the past 30 years has produced innovations such as the global positioning system and stealth and night-vision devices, Ronald Sega, director of defense research and engineering, told a House subcommittee here March 25.

The department's science and technology programs, Sega said in a prepared statement to the House Terrorism, Unconventional Threats and Capabilities Subcommittee, continues to be "vital to the support of our troops and is simultaneously developing the capabilities of our future forces."

For example, the thermobaric bomb that was used in Afghanistan to destroy al Qaeda and Taliban members in their mountain hideouts, Sega said, "is directly linked to the basic research in DoD."

Ceramic armor, said Tony Tether, director of the Defense Advanced Research Projects Agency, is another S&T innovation that's being employed to protect U.S. troops in Afghanistan and Iraq. Tether, who accompanied Sega at the House hearing, noted that boron carbide—ceramic material used in today's upgraded body armor—was once expensive to make.

"DARPA's investments eventually led to inexpensive plates of boron carbide," Tether explained, which helped "to clear the way for the improved interceptor body armor."

Other DARPA items developed for troops' use in Iraq and elsewhere, Tether noted, include the Phraselator—a hand-held device that translates spoken English phrases into foreign speech—and a compact water-sterilizing device.

Tether said DARPA also is working on miniaturized unmanned aerial vehicles, improved digital communications systems, and more precise sensor systems that could be used to detect and destroy hidden surface targets.

The U.S. military, Tether said, also looks to develop remote-controlled vehicles for the transport of supplies and other uses. He noted that DARPA sponsored a March 13 competition called "Grand Challenge," run on desert roads between Barstow, Calif., and Primm, Nev., that featured 21 civilian-developed, robot-controlled concept vehicles.

"Our goal was to reach out and involve people who would never ordinarily be found working on a problem for the DoD," Tether explained.

Other DARPA research conducted under the Human Assisted Neural Devices program, Tether said, seeks to use the human mind to run machinery.

"This program is finding ways to detect and directly decode signals in the brain so that thoughts can be turned into acts performed by a machine," he explained. The concept, he noted, "has actually been demonstrated, to a limited degree, with a monkey that was taught to move a telerobotic arm simply by thinking about it."

The ability to transmit thoughts into mechanical actions would have an "enormous" impact on military art, Tether acknowledged. Near-term benefits of such technology, he noted, could be applied "to our injured veterans, who would be able to control prosthetics in a natural way never before imagined."

Unmanned aerial and terrain vehicles and increased use of robotics will be a part of tomorrow's military, Tether noted. However, he maintained, "the idea is not simply to replace people with machines, but to team people with autonomous platforms."

This, Tether explained, will "create a more capable, agile, and cost-effective force, and one that also lowers the risk of U.S. casualties. "The use of unmanned aerial vehicles in Afghanistan and Iraq," he pointed out, "clearly demonstrates the value of this idea."

The Defense Advanced Research Projects Agency (DARPA) sponsored a March 13 competition called "Grand Challenge," run on desert roads between Barstow, Calif., and Primm, Nev., that featured 21 civilian-developed, robot-controlled concept vehicles. Pictured is the "Terrahawk" as it executes a turning maneuver in preparation for the March 13 DARPA Grand Challenge. This autonomous ground vehicle uses a leaning motion to steer.

Photo courtesy DARPA

AMERICAN FORCES PRESS SERVICE (APRIL 1, 2004)

NAVY MAY PLAY LEAD TRANSFORMATION ROLE, DOD OFFICIAL SAYS

K.L. Vantran

ANNAPOLIS, Md.—Naval services have the opportunity to play leading roles in the transformation of the U.S. military, the Defense Department's director of force transformation said here March 31.

"Transformation," retired Vice Adm. Arthur K. Cebrowski said at the Annapolis Naval History Symposium, is "new values, new attitudes, and new beliefs" and how those are expressed in human behavior and institutional behavior.

"While we have made very significant progress, there are clear indications that these are only the first steps," he added. "Much more must be done, and the pace is not ours to set."

The war in Iraq, the war on terrorism, and globalization are compelling not only the pace and the intensity of transformation, but also its character, said Cebrowski.

He spoke of the president's vision for America's national security that "embraces the solemn duty that confronts us today—to not only lift the dark threat of terrorism, but to build a safer, better world that favors human freedom, democracy, and free enterprise."

America's view of strategic response has been changed, said Cebrowski. Instead of being prepared to act in the wake of an attack—being reactive—the United States must be preventive, he said, a stance that indicates the need for a change in intelligence capabilities.

"Clearly, we have to know more sooner," he said. "We must acquire the capability to better identify and understand potential adversaries. This calls for different organizations, different systems, and different ways of sharing intelligence. We need the ability to look, to understand, and to operate deeply within the fault lines of societies where, increasingly, we find the frontiers of national security."

The most significant shift in force planning, he continued, is the rise of deductive thinking and capabilities-based planning, which "provides a framework for understanding some of the persistent and emerging challenges before us."

Naval force planning, said Cebrowski, always has been difficult because of two driving beliefs: Navies take a long time to build, and navies last a very long time. "Now, we realize that neither of these need be true," he added. "Rather, they are choices we can make or discard. We must challenge old assumptions and old metrics."

Organizations that can readily adapt and retain flexibility within their operating domains—whether in business or war—likely will survive in rapidly changing times, he said.

Cebrowski outlined four new metrics that will drive future force planning: the ability to create and preserve options, to develop high transaction rates, to develop high learning rates, and to achieve overmatching complexity at scale.

Also, said the transformation director, the United States must accelerate and expand its work in nonlethal weapons, directed and redirected energy, and biomedical response.

"Lastly, we need a new business model for space," said Cebrowski. "With the sharp increase in the capability per pound on orbit, now is the opportunity for the Navy to re-enter the space market."

DEPARTMENT OF DEFENSE NEWS RELEASE (APRIL 5, 2004)

DOD RELEASES SELECTED ACQUISITION REPORTS

The Department of Defense has released details on major defense acquisition program cost and schedule changes since the September 2003 reporting period. This information is based on the Selected Acquisition Reports (SARs) submitted to the Congress for the Dec. 31, 2003, reporting period.

SARs summarize the latest estimates of cost, schedule, and technical status. These reports are prepared annually in conjunction with the President's budget. Subsequent quarterly exception reports are required only for those programs experiencing unit cost increases of at least 15 percent or schedule delays of at least six months. Quarterly SARs are also submitted for initial reports, final reports, and for programs that are rebaselined at major milestone decisions.

The total program cost estimates provided in the SARs include research and development, procurement, military construction, and acquisition-related operation and maintenance (except for pre-Milestone B programs, which are limited to development costs pursuant to 10 USC §2432). Total program costs reflect actual costs to date as well as future anticipated costs. All estimates include anticipated inflation allowances.

The current estimate of program acquisition costs for programs covered by SARs for the prior reporting period (September 2003) was $1,246,878.1 million. After adding the costs for a new program, Warfighter Information Network-Tactical (WIN-T), and subtracting the costs for a final report on Global Combat Support System Army (GCSS Army) in September 2003, the adjusted current estimate of program acquisition costs was $1,257,229.2 million.

	Current Estimate ($ in Millions)
September 2003 (77 programs)	**$1,246,878.1**
Plus one new program (WIN-T)	+12,040.5
Less final report on GCSS Army program	-1,689.4
September 2003 Adjusted (77 programs)	**+1,257,229.2**
Changes Since Last Report:	
Economic	$ +7,398.0
Quantity	+8,435.8
Schedule	+14,030.1
Engineering	+4,610.2
Estimating	+31,327.2
Other	
0.0	
Support	+7,289.1
Net Cost Change	$+73,090.4
Plus EA-18G development costs not previously reported	+1,707.6
(EA-18G is submitting a separate initial SAR. Procurement costs were previously reported in the F/A-18E/F SAR, but development costs for the EA-18G are being reported for the first time.)	
December 2003 (78 programs)	**$1,332,027.2**

For the December 2003 reporting period, there was a net cost increase of $73,090.4 million or + 5.8 percent for those programs that have reported previously, excluding costs for the programs submitting initial SARs. For this submission, the initial SAR programs are Cobra Judy Replacement, Multi-Platform Radar Technology Insertion Program (MP-RTIP), and Small Diameter Bomb (SDB).

For the December 2003 reporting period, there was a net cost increase of $73 billion or + 5.8 percent for programs that have reported previously, excluding costs for the aforementioned programs submitting initial SARs. The net cost increase was due to higher program estimates (+ $31.3 billion), a net stretch-out of development and procurement schedules (+ $14.0 billion), a net increase of planned quantities to be purchased (+ $8.4 billion), the application of higher escalation indices (+ $7.4 billion), higher support costs related to increased quantities (+ $7.3 billion), and additional engineering changes (hardware/software) (+ $4.6 billion).

New SARs (As of December 31, 2003)

The Department of Defense has submitted initial SARs for Cobra Judy Replacement, Multi-Platform Radar Technology Insertion Program, and Small Diameter Bomb. These reports do not represent cost growth. Baselines established on these programs will be the point from which future changes will be measured. The current cost estimates are provided below:

Program	Current Estimate ($ in Millions)
Cobra Judy Replacement	$1,474.5
Multi-Platform Radar Technology Insertion Program (MP-RTIP)	1,565.6
Small Diameter Bomb	1,816.5
Total	**$4,856.5**

More detailed information on the most recent SARs can be found online at <http://www.defenselink.mil/news/Apr2004/d20040405sar.pdf>.

AMERICAN FORCES PRESS SERVICE (APRIL 7, 2004)

DOD DISCUSSES NEW SUPPLY TRACKING SYSTEM WITH VENDORS

Sgt. 1st Class Doug Sample, USA

WASHINGTON—Defense Department officials met this week with hundreds of vendors to discuss plans for implementing technology common among today's retailers to revolutionize the supply chain to the battlefield.

The three-day summit at the Washington Hilton began April 6.

Military logisticians hope to take the "factory to the foxhole" by using radio-frequency identification, or RFID tags to improve supply chains while reducing cost. The RFID technology has become part of a new DoD initiative making it mandatory for all items in the department's inventory to be distinguishable from one another.

Acting Under Secretary of Defense for Acquisition, Technology and Logistics Michael Wynne said RFID technology is a way for DoD to ensure military forces get everything they need, from "food and water to supply parts."

Many retail stores today, most notably the Wal-Mart chain, use RFID tags to track products and control inventory costs. State transportation departments use the technology to monitor tollbooth traffic, and farmers use it to keep track of cattle.

Wynne said he intends to have RFID tags "capture information about all critical assets as they move throughout DoD's supply chain" to decrease supply-chain costs and improve efficiency. Military logisticians will know exactly what is on a shipment pallet or container without having to unwrap it, he said.

The technology enables vendors to track where their supplies are located in DoD's supply chain process, he said.

The Defense Department issued a memo on its RFID policy earlier this year, requiring suppliers to put passive RFID tags on the packaging of the lowest possible piece, part, case, or pallet by January.

"RFID is a data collector," said Ed Coyle, chief of the Automatic Identification Technology Office for DoD Logistics. "RFID can feed a network (so) that you get the right information to the right place … so we can make decisions about what we move where and who should be using what materiel—managing the inventory."

Coyle told vendors at the summit that the "timing is right" for the technology within the Defense Department, urging them to come up with a product to meet the government's needs in a way that relies heavily on what's already in use in industry.

"We don't think our requirements are significantly different or different at all from those in the commercial sector," he said, "and from that perspective, we need to play very heavily with those in the commercial sector to make sure that the product we come up with collectively meets DoD's requirements. We don't want to have to be unique," he said.

Alan F. Estevez, assistant deputy under secretary of defense for supply chain integration, said DoD needs the technology for the same reason that has driven its adoption in industry: so that when the customer needs something, it's there. "Wal-Mart is doing it so that there is no 'stock out' for customers shopping in their stores," he said. "We have the same view. We don't want to 'stock out' for soldiers, sailors, or airmen out in the field."

Marine Cpl. Juan J. Sandoval, left, and Marine Capt.Tarrell D. Giersch, right, show the Commandant of the Marine Corps, Gen. Michael W. Hagee, a radio frequency identification tag interrogator–which allows the Marine Corps to track storage containers in transit–during a visit to the 1st Force Service Support Group at Camp Taqaddum, Iraq, April 7, 2004. Sandoval, 22, is from Mattawa, Wash. and Giersch, 32, is from Milwaukee, Wisc.

Photo by Marine Sgt. Matt Epright

AIR FORCE PRINT NEWS

EDWARDS TEST TEAM FIRES F-16'S FIRST AIM-9X SIDEWINDER (APRIL 16, 2004)

Leigh Anne Bierstine

EDWARDS AIR FORCE BASE, Calif. (AFPN)—A test team from the Global Power Fighters Combined Test Force fired the newest variant of the AIM-9 Sidewinder, the X variant, for the first time from an F-16 Fighting Falcon here April 9.

The Sidewinder is a supersonic, heat-seeking, air-to-air missile carried by fighter aircraft. Before this, the AIM-9X had been fired only from F-15 Eagles and U.S. Navy F-18 Hornets.

The test mission is part of the F-16 M4-plus test project currently going on here. The project tests an improved avionics system that will be used to upgrade about 600 active-duty F-16 aircraft.

This was the first firing in a series of tests designed to clear the new variant for use on the F-16, said Capt. Chad Hale, 416th Flight Test Squadron (FLTS) operations engineer for the project. The initial flights are designed to validate the effects predicted by its contracted developer.

The team's first two firings are unguided, and the flight profiles will build up to three guided firings against subscale drones, Captain Hale said.
In its first test, after clearing the aircraft the missile was programmed to perform a high-G dive into the ground. Air Force Maj. Ray Toth, 416th FLTS test pilot, fired the new Sidewinder. "The test went as planned, and there were no surprises," said Toth, who fired the missile over a test range at nearby China Lake Naval Air Weapons Center.

The team also evaluated how the new Sidewinder variant works with the Joint Helmet Mounted Cueing System. It is compatible with the system, which is designed to acquire targets more easily and decrease aircrew workload.

Results of the tests will have big payoffs for combat pilots, said Air Force Maj. Monte Cannon, a project pilot and 416th FLTS F-16 chase pilot for the mission.

"The AIM-9X test marks a tremendous increase in combat capability for the F-16," Cannon said. "Together, the Joint Helmet Mounted Cueing System and the missile will provide a lethal combination for pilots who find themselves in visual engagements."

The latest variant has the same rocket motor and warhead as the AIM-9M, which is the most current operational variant of the missile. However, the AIM-9X has major changes from previous versions including increased flight performance.

The Sidewinder was originally developed by the Navy for fleet air defense and was later adapted by the Air Force for use on fighter aircraft. Early versions of the missile were used in the Vietnam War.

EDWARDS AIR FORCE BASE, Calif.—A pilot from the 416th Flight Test Squadron successfully fires the newest variant of the AIM-9 Sidewinder for the first time from an F-16 Fighting Falcon on April 9.

U.S. Air Force photo by Tom Reynolds

The Joint Air-to-Surface Standoff Missile (JASSM) is an autonomous, long-range, conventional, air-to-ground precision cruise missile.

Image courtesy Lockheed Martin

JASSM GETS GO-AHEAD FOR FULL-RATE PRODUCTION (APRIL 23, 2004)

The Joint Air-to-Surface Standoff Missile (JASSM) was approved for full-rate production on April 16. Under the Milestone III decision, the Air Force will buy 4,900 missiles, while the Navy is expected to buy 450 JASSMs. Included in the 4,900 missile buy for the Air Force is a yet undetermined number of extended range JASSMs, or JASSM-ER. Lockheed Martin is developing this variant to fly 500 nautical miles, two-and-a-half times the range of the baseline missile. DoD's fiscal year 2005 budget request includes $145 million to purchase 360 JASSMs, and $191 million for research, development, test and evaluation activity, in part for JASSM-ER. The B-52, F-16, B-1, -2, and Navy F/A-18 will launch the baseline model. JASSM-ER is being eyed for the B-1 bomber.

AMERICAN FORCES PRESS SERVICE (MAY 6, 2004)

NEW SMALL BUSINESS RULES TO BENEFIT SERVICE-DISABLED VETS

WASHINGTON—A new procurement program boosts federal contract opportunities for Service-disabled veteran-owned small businesses, Small Business Administration officials here announced May 4.

The interim rule was published May 5 and is effective immediately. The Federal Acquisition Regulatory Coun-

cil concurrently released regulations implementing the program, officials said.

"President Bush has made it a priority to reach out to all of America's entrepreneurs, and we have a special responsibility to make an effort for those who sacrificed for our safety and freedom," said Hector V. Barreto, SBA administrator in announcing the program May 4. "We have made a strong effort to do precisely that."

Federal contract dollars to Service-disabled veterans increased from $298 million in fiscal 2002 to $510 million in fiscal 2003, Barreto said. "But we want to do more," he added. "The regulations being issued today will ensure that those great Americans who served our country proudly continue to have fair and open access to contracting opportunities."

Officials explained the new rule adds provisions to the Code of Federal Regulations that will allow contracting officers to restrict contract awards to small businesses owned by Service-disabled veterans when there is a reasonable expectation that two or more such small businesses will submit bids at a fair market price.

Small businesses owned by Service-disabled veterans can be awarded sole-source contracts when there is not a reasonable expectation that two or more such firms will submit bids and the anticipated contract price does not exceed $3 million, or $5 million for manufacturing contracts, officials said.

The interim rule allows small businesses to self-certify as Service-disabled veteran-owned businesses, officials said, and any challenge to a firm's status or standing must be referred to the SBA for resolution. The SBA will rely upon existing Department of Veteran's Affairs or Department of Defense determinations regarding status and will help enforce penalties for false representation, officials added

DAU WEST REGION OFFICIALLY OPENS HEADQUARTERS IN SAN DIEGO

Belinda Manley

The Defense Acquisition University (DAU) West Region campus officially opened for business at a ribbon cutting ceremony on Jan. 28, 2004. With the official opening of its West Region Headquarters in San Diego, Calif., DAU takes a major step towards achieving its goal of transforming acquisition training in support of the DoD AT&L workforce. The new San Diego facility is located on a military installation—Naval Base Point Loma—and offers many different Defense Acquisition Workforce Improvement Act (DAWIA) functional courses (program management, contract management, systems engineering, logistics, financial management, etc.).

The DAU West Region, led by Dean Andrew Zaleski, is composed of 50 staff and faculty members who focus primarily on teaching DAWIA certification courses and providing performance support (consulting, targeted training, and partnering with regional organizations) throughout 13 western states, including Hawaii and Alaska plus the Pacific Rim. The region's charter, which calls for working with major DoD agencies and remaining current on significant AT&L workforce issues, allows the region to better serve the acquisition needs of its customers across the entire spectrum of DoD's 13 acquisition career fields.

A Major Event for the Defense Acquisition Workforce

The ceremony was hosted by DAU President Frank Anderson Jr. and Dean Zaleski. In his opening statement, Zaleski welcomed local government and industry officials from the West Region, DAU directors, faculty, contractors, as well as distinguished guests participating in the day's events: Navy Adm. Jose Betancourt, Jr., commander, Navy Southwest Region; Navy Capt. Anthony Gonzales, commander, Naval Base Point Loma; Lou Kratz, deputy under secretary of defense (logistics plans and programs); Richard Zirk, director, Defense Contract Management Agency–West Region; Jim Churchill, Program Executive Office Command, Control, Communications, Computers and Intelligence (PEO C4I) and Space; Raymond Sayre, regional director, Western/Southwestern Region Navy College; and Rudy Fernandez, director, Economic Development and Veterans Military Liaison, representing the San Diego mayor's office.

"Today's ceremony is a major event in the ongoing transformation of DAU," said Zaleski. "A significant phase of this transformation has been the reorganization of DAU to a regionalization concept, whereby DAU has reorganized into five regions within the continental United States to become more customer-centric with the AT&L workforce. Today's event essentially completes this phase of the transformation."

Leveraging the Dollar Invested in Learning

Anderson praised organizers of the day's events. "This is really a fantastic day for the region and it has truly been a community effort," said Anderson. "This is not just DAU; it is about our teammates from the Navy and the people who are located here—Navy College and NPS (Naval Postgraduate School)—and how everybody

With the official opening of its West Region campus in San Diego, Calif., on Jan. 28, 2004, the Defense Acquisition University (DAU) takes a major step towards achieving its goal of transforming Department of Defense (DoD) acquisition training in support of the Acquisition, Technology and Logistics (AT&L) workforce. The official ribbon-cutting ceremony was hosted by DAU President Frank Anderson (left) and DAU West Region Dean Andrew Zaleski.

Photo by Richard Mattox

chipped in and pulled together. So, when you look at this facility," he added, "what we've created here is embedded learning, and it represents the best of what can happen in the Department if we learn how to collaborate, share, and work as a team of one."

Anderson told the audience that DAU holds classes during the day; the Navy College is running courses at night that will help young sailors pursue their degree requirements; and NPS is able to reach out to a much larger and broader Army and Navy community throughout the nation from their teaching center here.

"About two years ago, Mr. Wynne asked that we look at ways to team and partner, so that we *leverage the dollar invested in learning* ... It is a lot better for the DoD community when we can create this kind of facility that can be used by more than one DoD organization."

–Frank Anderson Jr.
President, DAU

"About two years ago, Mr. Wynne asked that we look at ways to team and partner, so that we *leverage the dollar invested in learning*," said Anderson. "It is a lot better for the DoD community when we can create this kind of facility that can be used by more than one DoD organization. So I am really excited about what has happened here today."

Strategic Partnerships Signed

In conjunction with the ribbon cutting, the DAU West Region signed three Strategic Partnerships with Alliant International University (AIU), San Diego, Calif; University of California, Los Angeles (UCLA); and University of California, Irvine (UCI). These partnerships offer significant educational opportunities for the Department of Defense Acquisition, Technology and Logistics (DoD AT&L) workforce, whereby multiple DAU courses may be transferred toward professional certificates, bachelor's, master's, and doctoral programs.

Editor's note: Manley provides contract support to the DAU West Region.

Andrew Zaleski

Dean, Defense Acquisition University West Region (DAU West)

Andrew Zaleski has held numerous leadership and management positions during 30 years' active duty in the United States Air Force, followed by seven years in the defense industry, and most recently as a federal civilian assigned to the Defense Acquisition University (DAU). Since rejoining the DAU in 2001, he has served as its first director of strategic planning and presently serves as the dean of the West Region.

While in the Air Force, he served as the base commander at Hanscom Air Force Base, Concord, Mass; chief planner and programmer for Air Force Systems Command (AFSC) formulating a $50 billion Program Objective Memorandum; AFSC chief of cost management, sponsoring numerous ACAT I program cost estimates through the OSD Cost Analysis Improvement Group (CAIG); weapon systems acquisition officer in two program management offices (B-1 Bomber and Fleet Satellite Communications); and contract administrative services officer in three defense industry plants, where he also served as an administrative contracting officer.

In the early 1990s, Zaleski served as the dean and Air Force element commander at the Defense Systems Management College, Fort Belvoir, Va. He acted as the college's key implementer of the Defense Acquisition Workforce Improvement Act and the focal point with the newly established Defense Acquisition University. Subsequently, he worked in industry, and was employed by Tecolote Research as their Washington Operations manager before returning to the DAU.

Zaleski was a senior research fellow at the National Defense University, Fort McNair, Washington, D.C. He is certified at Level III in DoD Program Management and Financial Management. He holds a bachelor's degree in engineering from the United States Military Academy, and two master's degrees—one in Systems Management and the other in athletic administration from the University of Southern California.

Seated at the head of the table as they sign an educational partnership agreement are Alliant International University (AIU) President, Dr Judith E. N. Albino, and Defense Acquisition University President Frank Anderson Jr. Also present at the signing are from left: Dr. Eric V. Gravenberg (AIU vice president for marketing and enrollment management); Dr. Mink Stavenga (dean, U.S. International College of Business); Andrew Zaleski, DAU West Region dean; and Kevin Carman, DAU West Region associate dean. The agreement with AIU allows for DAU course credits to be evaluated for transfer into all United States International College of Business certificate and degree programs, including bachelor's of business administration, information systems and technology management, and international business administration. Under the graduate degree programs, transfer of credits is acceptable for entry into the master of business administration, master of international business, and the doctor of business administration programs. DAU courses will be evaluated for the global logistics specialist certificate and the graduate certificate program in strategic management. Additional information concerning AIU programs is located online at <http://www.alliant.edu>.

Photos by Richard Mattox

Lori Munoz-Reiland (second from left), director, business and management/corporate education, University of California, Irvine, joins Frank Anderson Jr., DAU president (center), in signing an educational partnership agreement. Other officials attending the signing ceremony were from left: Angela Jeantet, assistant director, business and management/corporate education, University of California, Irvine; Andrew Zaleski, DAU West Region dean; and Kevin Carman, DAU West Region associate dean. The agreement with UCI allows for DAU course credits to be evaluated for transfer into six graduate certificate programs including the certificate in software engineering, systems engineering, certificate in environmental management, certificate in safety management, certificate in facilities management, and certificate in project management. Additional information concerning the UCI Extension programs is located online at <http://www.uciextension.com>.

Dr. Frank E. Burris (second from left), director, Department of Engineering, Information Systems and Technology Management (EISTM), joins DAU West Region Dean Andrew Zaleski in signing an educational partnership agreement. Also present at the signing were Kevin Carman, DAU West Region associate dean (left), and DAU President Frank Anderson (right). The agreement with UCLA Extension - EISTM offers a wide variety of programs and courses in technical and management disciplines. The agreement provides that DAU courses be accepted for entry into the certificate in manufacturing engineering, professional designation in government contract management, professional designation in government cost estimating and pricing, professional designation in purchasing, materiel management, and project management. Additional information concerning the UCLA Extension programs is located online at <http://www.uclaextension.edu>.

MILITARY DEPUTY TO ASA(AL&T) ADDRESSES ARMY ACQUISITION WORKFORCE ISSUES AND INITIATIVES

Christina Cavoli

When Army Lt. Gen. Joseph Yakovac Jr., took over the position of Military Deputy (MILDEP) to the Assistant Secretary of the Army for Acquisition, Logistics and Technology (AL&T) in December of 2003, he decided to take the first six months of his three-year tenure to focus on the military and civilian people who make up the Army Acquisition Corps. He announced that people and the personnel system would be his initial primary objective, even at the expense of other important issues.

The result has been a new plan that Yakovac hopes will bring the Acquisition Corps more in line with the challenges in managing and monitoring the career progression of a large, diverse workforce as well as the current pace of Army acquisition as it exists today.

Yakovac spoke at the Defense Acquisition University (DAU) at Fort Belvoir, Va., on April 16, in an open forum with members of the National Capital Region's AL&T workforce. He talked about his goals and objectives for the future of the Army Acquisition Corps and addressed current topics impacting the acquisition community at large.

"I have strong opinions, and at times, I act the 'benevolent dictator,'" said Yakovac. While some of his deci-

sions, he noted, are made without universal agreement, he is initiating changes that, based on his personal experience, are necessary.

A New Vision for Senior Leaders

In his first week as MILDEP, Yakovac implemented a major change from his predecessors by deciding not to serve as the senior rater for every program executive officer in the Army. His personal style of leadership, he explained, dictated that he rate only those with whom he had much greater interaction and direct communication, and the MILDEP position precluded this sort of relationship. Additionally, Yakovac said, he wanted to see leaders from across the acquisition community serve as senior raters, thus involving them in the process of selecting the next generation of general officers.

As he reviewed the career paths for 0-6 officers, Yakovac noted a startling fact: for the past few years, almost all 0-6 officers—about 75 percent—had been centrally selected for command opportunities. The central selection average for an Army officer at large was between 25 to 30 percent. These Acquisition Corps command selects, he noted, were "voting with their feet" by declining command opportunities in significant numbers, suggesting that maybe these selections were not providing a real "opportunity" after all.

Yakovac determined to drive down the number of centrally selected command opportunities to fall within the army-wide average. Reducing the number of command selects, he explained, would allow such a selection to serve as an indicator of potential when an 0-6 file is reviewed by the general officer board. Now, according to Yakovac, a job previously identified as "command-select" can be offered as a good job in a good location that should attract the right person rather than forcing command-selects to accept the job regardless of location or duties.

Rethinking Job Descriptions

Yakovac said he recently dedicated an entire week to reading every Army position listed on the Military Acquisition Position List (MAPL)—as "painful" as that was. Gaining a thorough knowledge of how members of the Acquisition Corps are being employed, however, reinforced to him that people are too often used as a resource where no one may be considering what that "resource" is being asked to do. Many of the job descriptions were written over a decade ago, he noted, with little thought as to the needs of a future organization; often, the original "birthright" number of acquisition officers has remained steadfast despite changing organizational goals and structure. Yakovac cautioned that in the future organizations accustomed to an automatic renewal of their supply of acquisition officers might find their mandate had been reduced from a standard 10 to perhaps only two, or whatever appeared applicable to their current mission.

After spending time reviewing every Army AL&T position, Yakovac said he has gained a good idea about where all 1,640 + MAPL positions are located and what is expected of acquisition officers. Some current slots are expected to be converted to civilian slots; others will be downgraded or deleted. He added that the attrition will occur over the next few years as these positions transition naturally; people will not be moved out of positions ahead of schedule to accommodate reorganizations.

Yakovac hopes to retain an acquisition footprint in places where the presence of acquisition professionals makes a difference in decisions as they pertain to the Army at large. He stated that an increased presence on the Joint Staff would be helpful, and he does not anticipate any reduction of presence in the Training and Doctrine Command (TRADOC), although restructuring may occur.

Developing Acquisition Professionals in a Larger Framework

Considering what the AL&T workforce expects is an important component in managing the Acquisition Corps,Yakovac said,. He talked about an informal survey that was issued to the Acquisition Corps that focused on basic questions:

- Do you think that the job you are in is professionally rewarding?
- If you were to be replaced, and your replacement called you to discuss your position, would you recommend your job?

The survey received over 600 responses, mainly from people serving in their first job. The results made clear that people were not always getting what they had signed up for; many, he noted, were being used in other ways, but not in a fashion that focused on learning and reinforcing acquisition skills.

Yakovac described a major change in the way acquisition professionals are developed by outlining a plan to establish regional networks that would develop and educate the acquisition workforce by exposing individuals to a variety of postings. He described a current study that is considering establishing a system that would post people to a region rather than a specific assignment; ac-

"In the final analysis, providing product to soldiers is the only reason acquisition professionals exist; to do so successfully, the Acquisition Corps must be flexible and have a workforce that can handle the constant change that is a modern reality."

—Army Lt. Gen. Joseph Yakovac Jr.
Military Deputy to the ASA(AL&T)

quisition leaders within each region would then be responsible for establishing a rotational plan for each acquisition officer that would provide a solid range of experience and education, and prepare the acquisition officers to comfortably handle a variety of PM taskings as they progress through a career. This breadth of experience, he predicted, could prove pivotal in creating successful officers and future leaders.

Yakovac commented that he was finding the civilian acquisition workforce "harder to crack" than their military counterpoints because of legislative constraints, but he nonetheless envisions an incentive system under which the Army's 40,000 + civilian acquisition workforce members might be better motivated. Civilian acquisition professionals, he advised, need to anticipate greater movement in their careers in the future; and those that are willing to compete for the most prestigious advancements would be those that are willing to shoulder such tasks as relocating. Yakovac predicted that a new and better system would emerge that could track civilians willing to make such career shifts and provide them specific opportunities accordingly.

A Note on Specialization

Yakovac noted that there are perhaps too many acquisition professional qualifiers, and that perhaps the corps has become over-stratified; for example, he questioned whether the "T" or testing qualifier was necessary given that most acquisition professionals should be able to perform tasks associated with this specific qualifier. He also focused on the increasing need for the "C" qualifier: contingency contracting. This requirement has grown almost overnight in importance, and now constitutes a large part of what the Acquisition Corps does, he stated. Furthermore, recent TRADOC guidance has defined the Armored Unit of Action breakout as including a requirement for contingency contractors; such emerging needs, he said, underscore the need for the modern acquisition professional to be adaptable. "Jobs and job descriptions," he emphasized, "can't remain stuck in the way the organization once operated."

Summarizing, Yakovac said, "In the final analysis providing product to soldiers is the only reason acquisition professionals exist; to do so successfully, the Acquisition Corps must be flexible and have a workforce that can handle the constant change that is a modern reality." He added that in addition to serving the warfighter, acquisition professionals must also be given a meaningful professional experience. Yakovac has publicly vowed to ensure his workforce is given the tools and environment necessary to achieve both goals.

Cavoli is a freelance writer/editor currently providing contract support to Defense AT&L *magazine.*

UNIQUE IDENTIFICATION (UID) MANDATORY ON DOD SOLICITATIONS

Unique Identification (UID) is a mandatory Department of Defense (DoD) requirement on all solicitations issued on or after Jan. 1, 2004. The *DoD Guide to Uniquely Identifying Items* and other relevant UID materials including policy memoranda can be found at <http://www.acq.osd.mil/uid> or <http://www.uniqueid.org>. The Defense Acquisition University (DAU) has developed UID program training that is available via on-site presentation. To request DAU training, send an e-mail to uidprogramtraining@dau.mil.

NDIA TO SPONSOR DEFENSE SYSTEMS ACQUISITION MANAGEMENT COURSE OFFERING FOR INDUSTRY MANAGERS

The National Defense Industrial Association will sponsor offerings of DAU's Defense Systems Acquisition Management (DSAM) course to interested industry managers Aug. 16-20, 2004, in Denver, Colo., and Nov. 29 – Dec. 3 in Orlando, Fla. DSAM uses the same acquisition policy information provided to DoD students who attend the Defense Acquisition University

courses for formal acquisition certification. It is designed to meet the needs of defense industry acquisition managers in today's dynamic environment, providing the latest information related to:

- Defense acquisition policy for weapons and information technology systems including discussion of the new DoD 5000 series (directive, instruction, and guidebook).
- Defense acquisition and logistics excellence initiatives.
- Defense acquisition procedures and processes.
- The Planning, Programming, and Budgeting System and the congressional budget process.
- The relationship between requirements generation, resource allocation, science and technology activities, and acquisition programs.

For further information, contact Christy O'Hara (703) 247-2586 or e-mail cohara@ndia.org. Prospective government students must first contact Air Force Maj. Jim Ashworth at (703) 805-5809 or e-mail james.ashworth@dau.mil.

POSITION CATEGORY DESCRIPTIONS & EXPERIENCE, EDUCATION & TRAINING REQUIREMENTS FOR FISCAL YEAR 2004

The deputy director, defense procurement and acquisition policy (acquisition workforce and career management) has released the fiscal 2004 approved position category descriptions and career field experience, education, and training requirements. The requirements are effective Oct. 1, 2003.

Unless designated as DESIRED, the requirements are MANDATORY for certification. The lists also include training requirements that will change during the fiscal year as new courses are deployed; each new course is listed with a projected deployment date. The career fields with projected changes are Contracting; Industrial/Contract Property Management; Purchasing; and Life Cycle Logistics (Sustainment path).

The descriptions and requirements can be downloaded from the Defense Procurement and Acquisition Policy Web site at <http://www.acq.osd.mil/dpap>. Should you have any questions, please contact Karla Merritt at (703) 681-3444 or e-mail karla.merritt@osd.mil.

OVERVIEW OF USD(AT&L) CONTINUOUS LEARNING POLICY

Acquisition personnel in Defense Acquisition Workforce Improvement Act (DAWIA) billets who are certified to the level of their position must earn 80 continuous learning "points" to meet Continuous Learning Policy requirements issued by the USD(AT&L) on Sep. 13, 2002. Continuous learning augments minimum education, training, and experience standards. Participating in continuous learning will enhance your career by helping you to:

- Stay current in acquisition functional areas, acquisition and logistics excellence-related subjects, and emerging acquisition policy.
- Complete mandatory and assignment-specific training required for higher levels of DAWIA certification.
- Complete "desired" training in your career field.
- Cross-train to become familiar with, or certified in, multiple acquisition career fields.
- Complete your undergraduate or advanced degree.
- Learn by experience.
- Develop your leadership and management skills.

A point is generally equivalent to one hour of education, training, or developmental activity. Continuous learning points build quickly when you attend training courses, conferences, and seminars; complete leadership training courses at colleges/universities; participate in professional activities; or pursue training through distance learning. Continuous Learning points are assigned to distance learning courses <http://clc.dau.mil> based on their academic credits or continuing education units. Other activities such as satellite broadcasts, viewing a video tape, listening to an audio presentation, or working through a CD-ROM or Internet course can earn continuous learning points on a 1 point per 1 hour of time devoted to that activity. On-the-job training assignments, intra- and inter-organizational, rotational, broadening, and development assignments may also qualify toward meeting the continuous learning standards.

NEW SUPPORTABILITY GUIDEBOOK

The Office of the Secretary of Defense has prepared a new supportability guidebook titled *Designing and Assessing Supportability in DoD Weapon Systems: A Guide to Increased Reliability and Reduced Logistics' Footprint*. The guidebook can be found on the AT&L Knowledge Sharing System Web site at <http://acc.dau.mil/simplify/ev.php?ID=15943_201&ID2=DO_TOPIC>.

One fundamental change in DoD policy is the designation of the weapon system Program Manager (PM) as the life cycle manager (Total Life Cycle Systems Management, or TLCSM), responsible not only for effective and timely acquisition of the system, but also for service as the primary manager and single point of ac-

countability for sustainment of a weapon system throughout its life cycle.

This guide provides a template for PMs to use in defining and assessing their program activities to meet DoD policy requirements throughout the weapon system life cycle. Emphasis is placed on designing for increased reliability and reduced logistics footprint and on providing for effective product support through performance-based logistics (PBL) strategies.

The guide uses the Defense Acquisition Management Framework and a systems engineering process to define the appropriate activities and required outputs throughout a weapon system's life cycle to include those related to sustainment of fielded systems. A System Operational Effectiveness framework is included that shows the linkage between overall operational effectiveness and weapon system and product support performance.

This guide provides a reference for PMs and their teams to design in and then assess the effectiveness of their TLCSM responsibilities in implementing PBL strategies anywhere along the system's life cycle.

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CORROSION PREVENTION AND CONTROL PROGRAM TRAINING AVAILABLE

The Defense Acquisition University (DAU), in conjunction with the Acquisition, Technology and Logistics-chartered Corrosion Action Team, has developed training for program offices in implementing Corrosion Prevention and Control (CPC) planning. Per acting under secretary of defense for acquisition, technology and logistics (USD(AT&L)) memorandum of Nov. 12, 2003, CPC planning is now required for all acquisition programs. The training—which includes an introduction by the USD(AT&L), Michael Wynne, an pverview brief, and hyperlinks to the *CPC Program Guidebook* and other CPC Program documentation—is available at DAU's CPC Training Web site <http://view.dau.mil/presentations/wynnepubfinal/corrosionprevention_files/default.htm> or send an e-mail requesting a CPC Program training CD to cpcprogramtraining@dau.mil.

UNIVERSITY OF VIRGINIA–DEFENSE ACQUISITION UNIVERSITY FORM STRATEGIC PARTNERSHIP

The University of Virginia and DAU have established a new partnership. This partnership allows DAU courses to count toward undergraduate certificates in accounting, procurement and contracts management, human resources management, and information technology. It also covers graduate certificates in procurement and contracts management, information security management, technology leadership, leadership, e-Commerce, and project management. For more information on the University of Virginia/DAU educational partnership, contact Wayne Glass at wayne.glass@dau.mil.

ACQUISITION PROFESSIONAL DEVELOPMENT PROGRAM (APDP) TRAINING

Students interested in attending the DAU-sponsored, mandatory acquisition training to meet the criteria for APDP certification should consult the DAU catalog <http://www.dau.mil/catalog/default.asp> or contact their local training office for additional information. Air Force students can also submit an application for a DAU course via ACQ Now, the Air Force's secure registration system for DAU courses: <https://www.atrrs.army.mil/channels/acqnow/default.asp>. DAU offers several basic acquisition courses via the Internet <http://www.dau.mil/registrar/apply.asp>, and these courses are open to any interested DoD employee. As members of the AT&L workforce, you are encouraged to take advantage of these training opportunities, especially the Web-based ACQ 101 course since it is a prerequisite for many of the other acquisition courses.

PERFORMANCE-BASED SERVICES ACQUISITION (PBSA) UPDATE

The purpose of the *Seven Steps to Performance-Based Services Acquisition (PBSA)* online guide <http://www.arnet.gov/Library/OFPP/BestPractices/pbsc/home.html> is to be the one-stop resource for all PBSA information to assist the acquisition community in awarding performance-based acquisitions. The guide is updated regularly with new policies and regulations, guidance, and now samples and examples. Some new additions to the guide are:

- Vetted samples and examples available online (click on the "Library" link at the above Web site); and
- Executive Version (hardcopy) of the guide that can be downloaded and printed (click on the "Executive Summary" link at the above Web site; then click on "Download Executive Version."

The General Services Administration welcomes PBSA information to add to the PBSA Web site, especially best practices, samples, and examples of performance work statements, performance incentive plans, performance measures and standards, and quality assurance sur-

veillance plans for any Service. To contribute to the PBSA repository of information, please submit documents to SevenStepstoPBSA.Feedback@gsa.gov.

AT&L KNOWLEDGE SHARING UPDATE

BUSINESS, COST ESTIMATING AND FINANCIAL MANAGEMENT (BCEFM) SPECIAL INTEREST AREA

If the BCEFM career field had a motto, it would be "Show me the money!" Without finances, defense acquisition programs would quickly stop. Fortunately, there is a new resource for the BCEFM career field—the BCEFM Special Interest Area (SIA) now online at the Acquisition Community Connection (ACC) Web site <http://acc.dau.mil/bcefm>. A brief overview of topics covered in the BCEFM SIA follows:

- Cost Analysis—Requirements for acquisition program cost estimates; estimating methodologies; learning curve; links to the Service cost analysis agencies.
- Defense Industry Business Management—financial management from the perspective of the defense contractor; evaluating a company's financial condition; business strategies.
- Financial Management—financial management from the government perspective, which includes topics on budget formulation (building a budget), budget enactment, and budget execution.
- Budget Policy—DoD budgeting policies (full, incremental, annual, etc); link to the DoD Financial Management Regulation; other useful links; budgeting implications of contract types; working capital funds.
- PPBE—The Planning, Programming, Budgeting and Execution (PPBE) System; Structure of the Future Years Defense Program (FYDP); budget exhibits.
- Budget Enactment—Congressional budget enactment process; DoD acquisition program oversight report requirements; links to recent legislation affecting DoD; links to sites covering congressional activity.
- Budget Execution—Apportionment of funds; execution process; fiscal law; reprogramming; obligation and expenditure plans; useful links.
- Earned Value Management—Theory and application of Earned Value Management.

In addition to finding information about various BCEFM topics, the SIA also contains information and links about upcoming conferences and events, and links to online learning materials, policy updates, and related Web sites.

If you are not currently a member of the ACC but are interested in joining the BCEFM community, please go to <http://acc.dau.mil/> and click "Join Now" on the right side of the home page. In the "Request Comment" link on the left side of the application screen, indicate your interest in being a part of the new BCEFM community. Also, the community is still looking for expert editors to be a part of the community. If you are interested in contributing, please contact the BCEFM community editor, John Jansen at: john.jansen@dau.mil.

PRODUCTION QUALITY MANUFACTURING SPECIAL INTEREST AREA

Manufacturing, as a discipline, has undergone dramatic changes in the last 10 years, and the area will continue to evolve for the production quality manufacturing (PQM) professional. As such, transformation is driving many new and pertinent questions for these professionals, such as:

- Where should the focus of the program manager (PM) be?
- How far does the program management office go in implementing this philosophy?
- Does the use of performance specification contracting mean there should be no insight?
- Does developing an insight into contractor operations and processes constitute telling contractors how to do their jobs?
- Should a production plan be required with incremental manufacturing reviews, or will the integrated product team environment suffice?
- How can I use design for producibility to help meet cost as an Independent variable goals?
- Does the program really have a manufacturing strategy and is it integrated with the acquisition strategy?
- How will the adaption of e-Manufacturing affect the ability of my contractor to perform on my program?

Perhaps the greatest benefit comes not from a specific answer but from the analyses and open discussions that ensure the right questions have been asked before tough issues are assumed away or ignored under the guise of acquisition reform.

The PQM Special Interest Area (SIA) is the place involved members can come not only to discuss these types of questions in online threaded discussions, but also to find learning materials, presentations, case studies, references, related Web sites, government reports, and much more about the ever-growing PQM area. Specific areas include product design, policy and guidance, process design and control, supply chain management, tools, training center, and community connection.

Visit the new PQM SIA at <http://acc.dau.mil/pqm> if you'd like to become a member. Also, if you are interested in contributing more fully to this site, please contact the site editor, Bill Motley at bill.motley@dau.mil.

PQM Site Main Page and Navigation

RENEWED FOCUS ON SYSTEMS ENGINEERING AT THE DEFENSE ACQUISITION UNIVERSITY

Dr. Randy Zittel

As complexity in DoD's technologies and products throughout the life cycle has grown, the importance of systems engineering has also grown. The global economy's interest now rivals the U.S. defense industries' dependence on systems engineering to manage the complexity of DoD's advanced technological systems. Since the early days of intercontinental ballistic missiles, systems engineering has been the methodology to manage competing requirements—an absolute necessity for safety and accuracy while achieving ever-increasing performance.

From its founding in 1990 as a national defense-related professional society to its emergence as an international organization with 49 chapters in 14 countries, the International Council on Systems Engineering (INCOSE) has promoted systems engineering as a formal academic discipline and world-class approach to product design in every market from defense, environmental restoration, automobiles, appliances, medical equipment and agricultural prioritization to anti-terrorism analyses. In addition, INCOSE is developing a professional systems engineering certification, a systems engineering body of knowledge, and numerous other activities that advance systems engineering state-of-the-art.

Publication of a February 2004 memorandum from the under secretary of defense for acquisition, technology and logistics (USD(AT&L)) titled, "Policy for Systems Engineering in DoD" is driving good systems engineering practices and processes back into the acquisition process. At the Defense Acquisition University (DAU), Dr. John R. Snoderly, a professor of systems engineering and founding member of INCOSE is leading that effort.

Snoderly, a past presiding president of INCOSE, has served as a professor at the DAU since 1980, as a previous systems engineering department head, and is currently the program director for all systems engineering curricula at DAU. He was elected chair of the INCOSE Technical Board in 1998 and president-elect in 2001. His recently concluded tenure as president ran from 2002 to 2004.

Snoderly cemented a DAU/INCOSE partnership agreement in January 2004 to share systems engineering information and support the USD(AT&L) initiative of revitalizing systems engineering in DoD. Additionally, he significantly expanded the interest in systems engineering and INCOSE by adding numerous international chapters and affiliations with the French and South Korean national systems engineering societies, as well as formal corporate sponsorships from the Japan Aerospace Exploration Agency and a number of U.S. gov-

Dr. John R. Snoderly, a professor of systems engineering at the Defense Acquisition University, is a founding member and past presiding president of INCOSE (2002-2004).

DoD photo

ernment agencies, including Naval Air Systems Command; Naval Surface Warfare Center–Dahlgren; Office of the Director, Defense Systems, USD(AT&L); National Security Agency; U.S. Air Force Center for Systems Engineering Excellence; and Federal Aviation Administration.

DAU benefits from the opportunities presented by INCOSE to remain on the leading edge of the systems engineering discipline, because membership from within the ranks of DAU staff and faculty translate into advancements in DAU's systems engineering curricula. In addition to updating the many existing courses offered by DAU, new courses in systems engineering, science and technology transition management, and advanced concept technology demonstrations were developed for 2004. DAU is currently teaching tailored systems engineering courses for Defense Contract Management Agency, Defense Information Systems Agency, Naval Air Systems Command, Defense Threat Reduction Agency, Defense Logistics Agency, Army Aviation and Missile Command and Program Executive Office-Aviation, Federal Aviation Administration, and the Australian and South African Departments of Defense.

During his tenure, INCOSE has transformed its governance and focus to a true international body. Snoderly was succeeded this year by Heinz Stoewer of Space Associates, GmbH, of Germany—the first truly international president of INCOSE.

Zittel is a professor of systems engineering at the DAU Capital and Northeast Region, Fort Belvoir, Va.

INTERACTIVE DOD 5000 SERIES DOCUMENTS

The Defense Acquisition University has activated an interactive DoD 5000 Web site as a useful tool intended to allow users to easily navigate among the following three interactive DoD 5000 series documents: DoD Directive 5000.1, DoD Instruction 5000.2, and the *Defense Acquisition Guidebook*.

The interactive DoD 5000 documents at <http://dod5000.dau.mil/dod5000%20instructions.htm> contain internal and external links to sources of information based on subject matter and topic areas, and are integrated with the AT&L Knowledge Sharing System (AKSS) and Acquisition Community Connection (ACC) Web sites at <http://deskbook.dau.mil/jsp/default.jsp> and <http://acc.dau.mil/simplify/ev_en.php> respectively.

ACQUISITION COMMUNITY CONNECTION SHORTCUT URL'S

The Defense Acquisition University has now made it easier for you to get directly to your favorite areas within the Acquisition Community Connection (ACC) Web site. For easier access, bookmark these shortcut URLs:

Program Management:	http://acc.dau.mil/pm
Risk Management:	http://acc.dau.mil/rm
Contract Management:	http://acc.dau.mil/cm
Systems Engineering:	http://acc.dau.mil/se
Logistics Management:	http://acc.dau.mil/log
Facilities Engineering:	http://acc.dau.mil/fe
Essential Models Project:	http://acc.dau.mil/emp
Information Technology:	http://acc.dau.mil/it
PQM:	http://acc.dau.mil/pqm

U.S. ARMY HUMAN RESOURCES COMMAND, ALEXANDRIA, VA. ARMY APPROVES RECOGNITION OF PROFESSIONAL LOGISTICIAN CERTIFICATION

Effective April 15, 2004, Army officers/warrant officers in any branch/specialty who have been awarded the designation "Certified Professional Logistician" (CPL) by The International Society of Logistics (SOLE) are authorized to add their CPL certification to their Officer Record Brief (ORB) and Official Military Personnel Folder (OMPF). This change to AR 600-8-104, *Military Personnel Information Management/Records* authorizes the inclusion of the CPL certificate in the OMPF. The CPL joins, among others, the Certified Professional Engineer (CPE), the Certified Professional Accountant (CPA), and the Certified Professional Contract Manager (CPCM) as civilian-granted professional certifications authorized for documentation and recognition as specialized education and training. The CPL certification will be reflected in "Section X–Remarks" on the lower left portion of the ORB. Army National Guard (ARNG) CPLs can submit their certifications now to the respective State Military Personnel Offices. All Army/Army Reserve CPLs can submit their documentation, following one of the procedures below:

Submit a notarized copy of the SOLE CPL certificate to your assignment officer at:

FOR ACTIVE ARMY

COMMANDER
U.S. ARMY HUMAN RESOURCES COMMAND
ATTN: AHRC-OPC (YOUR BRANCH)
200 STOVALL STREET
ALEXANDRIA VA 22332

For Army Reserve

COMMANDER
U.S. ARMY HUMAN RESOURCES COMMAND
ATTN: ARPC-ARO-R (for AGR) or ARPC-CIS-PV (for IRR/TPU/IMA)
1 RESERVE WAY
ST. LOUIS MO 63132-5200

For Active Army Only

Scan and e-mail a copy of the certificate to your Assignment officer. Addresses can be found on the HRC Web site at <http://www.perscom.army.mil/opmd/Branch%20Homepages.htm>.

For any of the above procedures include your name and social security number on the side corner of the copy of the certificate. Include a note indicating your name and social security number and state that you want CPL certification added to your OMPF. Your assignment officer will update your ORB and forward the certificate for inclusion in PERMS—the Army's Personnel Electronic Records Management System.

Questions regarding the Active/Reserve ORB/OMPF procedures should be directed to Army Maj. James Kennedy (OD), XO CSSD at 703-325-5262 or kennedj0@hoffman.army.mil. ARNG questions should be directed to the respective State Military Personnel Office. For assistance in replacement CPL certificates or questions regarding the CPL program, contact SOLE Headquarters at 301-459-8446 or solehq@erols.com.

ACQUISITION SUPPORT CENTER PUBLISHES HANDBOOK ON "ACQUISITION CAREER MANAGEMENT ADVOCATES"

The U.S. Army Acquisition Support Center (ASC) at Fort Belvoir, Va., has published a fiscal 2004 *Acquisition Career Management Advocates (ACMA) Handbook* to provide the tools needed to help ACMAs communicate with and support the workforce and ASC. This is the first tool of its kind to be developed especially for the ACMA's interest and needs. It covers a variety of ACMA-specific topics including roles and responsibilities and the tools available to the ACMA to help accomplish tasks. It is designed to be a desktop reference. The handbook is only available on the ASC Web site at <http://asc.army.mil/pubs>. Updates will be made periodically.

AT&L WORKFORCE—KEY LEADERSHIP CHANGES

NEW EXPEDITIONARY FIGHTING VEHICLE PROGRAM MANAGER

The Marine Corps Expeditionary Fighting Vehicle (EFV) officially changed program managers during a ceremony at the EFV program office in Woodbridge, Va., on April 1. Col. Clayton Nans, the current program manager, retired from active duty in the U.S. Marine Corps and was replaced by Marine Col. Michael Brogan, who was previously the product group director for infantry weapons systems at Marine Corps Systems Command. Brogan has also served as commander of the 3rd Assault Amphibian Battalion at the 1st Marine Division and program manager for the Advanced Amphibious Assault Vehicle survivability program.

DEPARTMENT OF DEFENSE NEWS RELEASE (MARCH 17, 2004) FLAG OFFICER ANNOUNCEMENTS

Secretary of Defense Donald H. Rumsfeld announced today that the president has made the following nominations:

Navy Capt. James M. Hart has been nominated for appointment to the rank of rear admiral (lower half). Hart is currently serving as deputy for naval aviation and tactical air systems to the deputy director, Defense Systems, Air Warfare, Office of the Under Secretary of Defense, Washington, D.C.

Navy Capt. Archer M. Macy Jr., has been nominated for appointment to the rank of rear admiral (lower half). Macy is currently serving as major program manager for integrated warfare systems, Washington, D.C.

Navy Capt. William D. Rodriguez has been nominated for appointment to the rank of rear admiral (lower half). Rodriguez is currently serving as major program manager for command and control systems, San Diego, Calif.

Navy Capt. Victor C. See Jr., has been nominated for appointment to the rank of rear admiral (lower half). See is currently serving as deputy program manager for systems engineering, Space and Naval Warfare Systems Command, Chantilly, Va.

Navy Capt. Walter M. Skinner has been nominated for appointment to the rank of rear admiral (lower half). Skinner is currently serving as deputy program manager for air anti-surface warfare, Assault and Special Mission Programs, Patuxent River, Md.

DEPARTMENT OF DEFENSE NEWS RELEASE (MARCH 23, 2004)
GENERAL OFFICER ASSIGNMENTS

The chief of staff, Army announces the assignment of the following general officers:

Maj. Gen. Ronald L. Johnson, director of military programs, United States Army Corps of Engineers, with duty as commander, Gulf Region Division/United States Deputy to the director, Program Management Office, Coalition Provisional Authority, Operation Iraqi Freedom, Iraq, to director, Installation Management Agency, Arlington, Virginia.

Brig. Gen. Thomas P. Bostick, assistant division commander (Support), 1st Cavalry Division, Fort Hood, Texas, to director of military programs, United States Army Corps of Engineers, with duty as commander, Gulf Region Division/United States Deputy to the director, Program Management Office, Coalition Provisional Authority, Operation Iraqi Freedom, Iraq.

DEPARTMENT OF DEFENSE NEWS RELEASE (MARCH 31, 2004)
GENERAL OFFICER ASSIGNMENT

The chief of staff, Army announces the assignment of the following general officer:

Brig. Gen. James R. Myles, commanding general, United States Army Operational Test Command, Fort Hood, Texas, to commanding general, United States Army Test and Evaluation Command, Alexandria, Va.

AIR FORCE SENIOR LEADER MANAGEMENT OFFICE ANNOUNCEMENTS (APRIL 8, 2004)

Senior Leader Retirements

Lt. Gen. Ronald T. Kadish, effective Aug. 1, 2004, from director, Missile Defense Agency, Arlington, Va.

Gene L. Hathenbruck, effective June 3, 2004, from director, Logistics Management, Ogden Air Logistics Center, Air Force Materiel Command, Hill AFB, Utah.

General Officer Nomination

The president has nominated to the Senate the following general officer for appointment to the grade of lieutenant general with assignment as indicated:

Maj. Gen. Henry A. Obering III, from deputy director, Missile Defense Agency, Arlington, Va., to director, Missile Defense Agency, Arlington, Va.

Senior Leader Assignments

Brig. Gen. Thomas F. Deppe, from deputy director for operations, National Military Command Center, J-3, Joint Staff, Pentagon, Washington, D.C., to director, logistics and communications, Headquarters Air Force Space Command, Peterson AFB, Colo.

Brig. Gen. (S) William N. McCasland, from materiel wing director, space vehicles, Air Force Research Laboratory, Air Force Materiel Command, Kirtland AFB, N.M., to deputy for support, Ogden Air Logistics Center, Air Force Materiel Command, Hill AFB, Utah

Ernest A. Parada, from director, plans and programs, Electronic Systems Center, Air Force Materiel Command, Hanscom AFB, Mass., to director, logistics management, Ogden Air Logistics Center, Air Force Materiel Command, Hill AFB, Utah.

DEPARTMENT OF DEFENSE NEWS RELEASE (APRIL 28, 2004)
FLAG OFFICER ANNOUNCEMENTS

Secretary of Defense Donald H. Rumsfeld announced today that the president has made the following nominations:

Navy Capt. John J. Prendergast III has been nominated for appointment to the rank of rear admiral (lower half). Prendergast is currently serving as deputy commander for fleet logistics operations, Naval Supply Systems Command, Mechanicsburg, Pa.

Navy Capt. Wayne G. Shear has been nominated for appointment to the rank of rear admiral (lower half). Shear is currently serving as deputy commander, Naval Facilities Engineering Command, Washington, D.C.

DEPARTMENT OF DEFENSE NEWS RELEASE (APRIL 30, 2004)
FLAG OFFICER ANNOUNCEMENT

Secretary of Defense Donald H. Rumsfeld announced today that the president has made the following nomination: Navy Rear Adm. (lower half) Alan S. Thompson has been nominated for appointment to the rank of rear admiral. Thompson is currently serving as director, Supply, Ordnance and Logistics Operations Division, N41, Office of the Chief of Naval Operations, Washington, D.C.

DEPARTMENT OF DEFENSE NEWS RELEASE (APRIL 30, 2004)
GENERAL OFFICER ASSIGNMENTS

The chief of staff, Army announces the assignment of the following officers:

Brigadier General Vincent E. Boles, commanding general, 3d Corps Support Command, United States Army Europe and Seventh Army, to commanding general, United States Army Ordnance Center/Commandant, United States Army Ordnance Schools, Aberdeen Proving Ground, Md.

Brigadier General Charles W. Fletcher Jr., assistant deputy chief of saff, G-4, United States Army, Washington, D.C., to commanding general, Military Surface Deployment and Distribution Command, Alexandria, Va.

Brigadier General Kathleen M. Gainey, commander, Defense Distribution Center, Defense Logistics Agency, New Cumberland, Pa., to director, Force Projection and Distribution, G-4, United States Army, Washington, D.C.

Brigadier General Paul S. Izzo, program executive officer, ammunition, Picatinny Arsenal, N.J., to commanding general, Picatinny Arsenal, Picatinny Arsenal, N.J. He will maintain his responsibilities as program executive officer, ammunition.

Brigadier General Jerome Johnson, director of plans, operations and readiness, Office of the Deputy Chief of Staff, G-4, United States Army, Washington, D.C., to commanding general, United States Army Field Support Command, Rock Island, Ill.

Brigadier General William M. Lenaers, commanding general, United States Army Ordnance Center/commandant, United States Army Ordnance Schools, Aberdeen Proving Ground, Md., to commanding general, United States Army Tank-automotive and Armaments Command, Warren, Mich.

Brigadier General Michael R. Mazzucchi, program executive officer, command, control, and communications (tactical), Fort Monmouth, N.J., to commanding general, United States Army Communications-Electronics Command and Fort Monmouth, Fort Monmouth, N.J. He will maintain his responsibilities as program executive officer, command, control, and communications (tactical).

Brigadier General James R. Moran, program executive officer, Program Executive Office Soldier, Fort Belvoir, Va., to deputy commanding general for operations, United States Army Research, Development and Engineering Command and commanding general, Soldier Systems Center, Natick, Mass. He will maintain his responsibilities as program executive officer, Program Executive Office Soldier.

Brigadier General Roger A. Nadeau, program executive officer, ground combat systems, Warren, Mich., to deputy commanding general, United States Army Research, Development and Engineering Command, Aberdeen Proving Ground, Md.

DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 3, 2004)
GENERAL OFFICER ASSIGNMENT

The chief of staff, Army announces the assignment of the following general officer: Brigadier General Marvin K. McNamara, commanding general, United States Army Developmental Test Command, Aberdeen Proving Ground, Md., to deputy director for force structure, integration, and deployment, Missile Defense Agency, Arlington, Va.

DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 5, 2004)
FLAG OFFICER ANNOUNCEMENTS

Secretary of Defense Donald H. Rumsfeld announced today that the president has nominated:

Rear Adm. Justin D. McCarthy, Supply Corps, for appointment to the grade of vice admiral and with assignment as director for Material Readiness and Logistics, N4, Office of the Chief of Naval Operations, Pentagon, Washington, D.C. McCarthy is currently serving as commander, Naval Supply Systems Command /Chief of Supply Corps, Mechanicsburg, Pa.

Capt. Peter M. Grant III has been nominated for appointment to the rank of rear admiral lower half. Grant is currently serving as deputy for Systems Engineering and Integration, Missile Defense Agency, Washington, D.C.

DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 6, 2004)
GENERAL OFFICER ANNOUNCEMENT

Secretary of Defense Donald H. Rumsfeld announced today that the president has nominated Marine Corps Major General James N. Mattis for appointment to the grade of lieutenant general and assignment as the commanding general, Marine Corps

Combat Development Command. Mattis is currently serving as the commanding general, 1st Marine Division in Iraq.

DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 11, 2004)

FLAG OFFICER ANNOUNCEMENTS

Secretary of Defense Donald H. Rumsfeld announced today that the president has made the following nominations:

Navy Rear Adm. (lower half) Jeffrey A. Brooks has been nominated for appointment to the rank of rear admiral (lower half). Brooks is currently serving as fleet maintenance officer, U.S. Atlantic Fleet, Norfolk, Va.

Navy Rear Adm. (lower half) Charles T. Bush has been nominated for appointment to the rank of rear admiral. Bush is currently serving as program executive officer for Integrated Warfare Systems, Washington, D.C.

Navy Rear Adm. (lower half) Steven L. Enewold has been nominated for appointment to the rank of rear admiral. Enewold is currently serving as deputy director for Joint Strike Fighter, Office of the Secretary of Defense, Washington, D.C.

Navy Rear Adm. (lower half) Timothy L. Heely has been nominated for appointment to the rank of rear admiral. Heely is currently serving as program executive officer for Strike Weapons and Unmanned Aviation, Patuxent River, Md.

Navy Rear Adm. (lower half) Samuel J. Locklear III has been nominated for appointment to the rank of rear admiral. Locklear is currently serving as deputy director, Surface Warfare Division, N76B, Office of the Chief of Naval Operations, Washington, D.C.

Navy Rear Adm. (lower half) Joseph Maguire has been nominated for appointment to the rank of rear admiral. Maguire is currently serving as commander, Naval Special Warfare Command, San Diego, Calif.

DEPARTMENT OF DEFENSE NEWS RELEASE (JUNE 2, 2004)

FLAG OFFICER ASSIGNMENT

Chief of Naval Operations Adm. Vern Clark announced the following flag officer assignment:

Navy Rear Adm. Mark D. Harnitchek is being assigned as vice director for Logistics, J4, Joint Staff, Washington, D.C. Harnitchek is currently assigned as commander, Navy Inventory Control Point Philadelphia/Mechanichsburg, Pa.

FAC 2001-21, FAR CASE 2003-023, PURCHASES FROM FEDERAL PRISON INDUSTRIES-REQUIREMENT FOR MARKET RESEARCH

The Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) have agreed on an interim rule amending the Federal Acquisition Regulation (FAR) to implement Section 637 of Division F of the Consolidated Appropriations Act, 2004. Section 637 provides that no fiscal year 2004 funds shall be expended for purchase of a product or service offered by Federal Prison Industries, Inc., unless the agency making the purchase determines that the offered product or service provides the best value to the buying agency. To read the entire text of FAC 2001-21, go to <http://www.arnet.gov/far/fac.html>.

DEFENSE SCIENCE BOARD REPORT RELEASED (FEBRUARY 2004)

The Defense Science Board (DSB) Task Force on Future Strategic Strike Forces delivered a report to the Pentagon's acting under secretary of defense (acquisition, technology and logistics) in February 2004 < http://www.acq.osd.mil/dsb/fssf.pdf > that proposes radical restructuring of the nation's nuclear weapons program. The recommendations, as stated in the report, are designed to provide "future presidents an integrated, flexible, and highly reliable set of strike options with today's tactical-level flexibility but on a global scale."

The proposed restructuring would shift the main focus of the nation's nuclear program from refurbishing and maintaining the existing stockpile to developing weapons that are more relevant to future threats.

The DSB, which began its work in summer 2003, was tasked to assess the effectiveness of the nation's current and planned strategic strike capability against threats that could be faced 30 years out. The task force found that if the United States is to provide strike options effective against future threats, it must reorient its nuclear arsenal away from "large, high-fallout weapons delivered primarily by ballistic missiles" toward smaller, more precise nuclear weapons that can be used for a variety of special missions.

The nuclear arsenal was not the only area the task force examined in mapping out the future of strategic strike. It also examined non-nuclear weapons, the systems that are needed to deliver weapons of both kinds, and the intelligence, surveillance, and reconnaissance (ISR) systems required to identify targets, among other aspects of the strategic strike mission.

The key recommendations in these other areas are:

- The Services, with the Defense Threat Reduction Agency, should "procure a contingency arsenal of current successful special-purpose, non nuclear weapons" such as the recently developed Massive Ordnance Air Burst bomb;
- A limited number of new delivery systems are needed to hit time-critical targets from long range in all weather, destroy hard and deeply buried targets, and "perform these functions more reliably, accurately, and stealthily" than existing systems; and
- As the Defense Department's current ISR and battle damage assessment systems are "pushing the limits of what we can achieve from space and airborne platforms," U.S. Special Operations Command and the Defense Advanced Research Projects Agency should develop "technologies and systems for networked close-in sensors."

If the task force's recommendations are implemented, the report concludes, "the president will have realistic, high-confidence strategic strike options to reassure friends, change the behavior of enemies, and protect American interests."

DEFENSE FAR SUPPLEMENT (DFARS) CHANGE NOTICE 20040323

The Department of Defense published the following final and proposed rules in the *Federal Register* on March 23, 2004:

INTERIM RULE:

Contract Period for Task and Delivery Order Contracts (DFARS Case 2003-D097)

Establishes a 5-year limitation on the contract period for a task order or delivery order contract awarded by DoD under the authority of 10 U.S.C. 2304a; and clarifies that the total contract period includes all options or modifications. The rule implements Section 843 of the National Defense Authorization Act for Fiscal Year 2004 (Public Law 108-136). Additional information regarding implementation of this rule is available at <http://www.acq.osd.mil/dpap/dfars/changes.htm>.

FINAL RULES:

Buy-to-Budget Acquisition of End Items (DFARS Case 2002-D036)

Finalizes, without change, the interim rule published on July 22, 2003 (DFARS Change Notice 20030722). The rule authorizes DoD to acquire a higher quantity of an end item than the quantity specified in law, under certain conditions. This rule implements Section 801 of the National Defense Authorization Act for Fiscal Year 2003 (Public Law 107-314). The Federal Register notice for this rule is available at <http://www.acq.osd.mil/dpap/dfars/changes.htm>.

Multiyear Contracting Authority Revisions (DFARS Case 2002-D041)

Finalizes, without change, the interim rule published on August 21, 2003 (DFARS Change Notice 20030821). The rule restricts the use of multiyear contracts for supplies to only those for complete and usable end items, and restricts the use of advance procurement to only those long-lead items necessary in order to meet a planned delivery schedule for complete major end items. This rule implements Section 820 of the National Defense Authorization Act for Fiscal Year 2003 (Public Law 107-314). The Federal Register notice for this rule is available at <http://www.acq.osd.mil/dpap/dfars/changes.htm>.

PROPOSED RULE:

Contractors Accompanying a Force Deployed (DFARS Case 2003-D087)

Proposes policy and a contract clause to address situations that require contractor employees to accompany a force engaged in contingency, humanitarian, peacekeeping, or combat operations outside the United States. The proposed changes will enable the uniform treatment of contractors that accompany a deployed force, and will enable combatant commanders to rapidly adjust contract requirements in response to changing conditions on the battlefield. The Federal

Register notice for this rule is available at <http://www.acq.osd.mil/dpap/dfars/changes.htm>.

DEFENSE FAR SUPPLEMENT (DFARS) CHANGE NOTICE 20040423

DoD published the following proposed rules in the Federal Register on April 23, 2004. The proposed rules are a result of DFARS Transformation, which is a major DoD initiative to dramatically change the purpose and content of the DFARS. Additional information on the DFARS Transformation initiative is available at <http://www.acq.osd.mil/dpap/dfars/transf.htm>.

Proposed Rule

Threshold for Small Business Specialist Review (DFARS Case 2003-D060)

Proposes to eliminate requirements for small business specialists to review proposed acquisitions that are (1) within the scope and under the terms of the existing contract; or (2) under $100,000 and totally set aside for small business concerns. Also proposes to relocate text addressing the functions of small business specialists to the new DFARS companion resource, *Procedures, Guidance, and Information (PGI)*. A proposed rule describing the purpose and structure of PGI was published on Feb. 23, 2004 (DFARS Change Notice 20040223; DFARS Case 2003-D090).

The Federal Register notice for this rule is available at <http://www.acq.osd.mil/dpap/dars/dars/fedregs/2003d060p.txt>.

Proposed Rule

Small Disadvantaged Businesses and Leader Company Contracting (DFARS Case 2003-D092

Proposes to lower the approval level for subcontracting plans that contain a small disadvantaged business goal of less than 5 percent, from two levels above the contracting officer to one level above the contracting officer. Also proposes to delete text addressing the participation of small disadvantaged business concerns in leader company contracting. DoD rarely uses leader company contracting and, instead, provides incentives for major DoD contractors to assist small disadvantaged business concerns through the DoD Pilot Mentor-Protégé Program.

The Federal Register notice for this rule is available at <http://www.acq.osd.mil/dpap/dars/dars/fedregs/2003d092p.txt>.

SOURCE SELECTION DRAFT POLICY AND PROCEDURES

The new Air Force Source Selection Policy is now official. It was issued in AFAC 96-2 dated June 4, 2004. This is the policy to be followed for all Air Force source selections. AFFARS Appendices AA and BB are *obsolete* and must no longer be used. All previous draft versions of the policy should be discarded. *Only* AFAC 96-2 should be followed. If you have questions or need additional information, contact Kathleen James at DSN 425-7059 or e-mail jamesk@pentagon.af.mil.

ARMY REVISES MILITARY-CIVILIAN TECHNOLOGY TRANSFER REGULATION (MARCH 26, 2004)

The revised Department of the Army (DA) Regulation 70-57, *Military-Civilian Technology Transfer* prescribes DA policies and responsibilities for technology transfer with the domestic civilian sector. Specifically, it provides policies and operational guidelines for entering into cooperative research and development agreements, for the licensing of intellectual property, for the provision of technical assistance to state and local governments, and for other cooperative efforts in research and development necessary to provide new technologies of interest to both the civilian and military sectors.

The proponent of the regulation is the assistant secretary of the Army (acquisition, logistics and technology). Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to the assistant secretary of the Army (acquisition, logistics and technology), ATTN: SAAL-ZT, 103 Army Pentagon, Washington, DC 20310-0103. View the revised regulation from the "Official Publications" link on the Army Publishing Directorate Web site at <http://www.usapa.army.mil/usapa_officialsite.htm>.

ARMY PUBLISHES MAJOR REVISION TO LOGISTICS READINESS AND SUSTAINABILITY REGULATION (MARCH 26, 2004)

The revised Department of the Army Regulation 700-138, *Army Logistics Readiness and Sustainability* establishes policies, responsibilities, and procedures to be followed for reporting the physical condition of Army equipment and the ability/inability to perform its intended mission. This revision implements Department of Defense Instruction 3110.5 , and it prescribes policies and procedures for total logistics readiness sustainability analysis, the annual logistics assessment of the Army's capability to deploy and sustain combat forces.

The proponent of this regulation is the deputy chief of staff, G-4 (DCS, G-4). Supplementation of this regulation and establishment of command and local forms are prohibited without prior approval from the deputy chief of staff, G-4 (DCS, G-4), HQDA (DALO-PLR), 500 Army Pentagon, Washington, DC 20310-1600. View the revised regulation from the "Official Publications" link on the Army Publishing Directorate Web site at < http://www.usapa.army.mil/usapa_officialsite.htm > .

AIR FORCE PUBLISHES CONCEPT OF OPERATIONS FOR ACQUISITION CENTERS OF EXCELLENCE

Dr. Marvin R. Sambur, assistant secretary of the Air Force (acquisition), and General Gregory S. Martin, commander, Air Force Materiel Command (AFMC) signed on March 2, 2004, a Concept of Operations for Acquisition Centers of Excellence (ACE CONOPS).This CONOPS defines the objectives and functions for the Acquisition Center of Excellence (ACE) organization and how all elements of the ACE community contribute to the overall strategy for implementing Agile Acquisition.

On March 19, the CONOPS was sent by Sambur and Martin to all senior acquisition leadership for implementation. The new ACE objectives emphasize implementing the tenets of Agile Acquisition throughout all acquisition and sustainment programs. For more information or to read the ACE CONOPS in its entirety, go to the ACE Web site at < http://www.safaq.hq.af.mil/ACE/ > .

INCENTIVE PROGRAM TO PURCHASE CAPITAL ASSETS MANUFACTURED IN THE UNITED STATES

Section 822 of the National Defense Authorization Act for Fiscal Year 2004 (Public Law 108-136), requires the secretary of defense to establish an incentive program for contractors to purchase capital assets manufactured in the United States. This provision applies only to major defense acquisition programs and contracts entered into after May 2005. The secretary may use the Industrial Base Capabilities Fund established under Section 814 of the National Defense Authorization Act for Fiscal Year 2004 for this purpose. The provision also directs the secretary to provide consideration in source selection for contractors with eligible assets for major defense systems. At this time, no dollars have been appropriated for this fund.

DoD is in the process of crafting such a program but believes industry input is essential to constructing an effective incentive program. To that end, the Department will be publishing a *Federal Register* notice during the month of April 2004 that will seek industry input on identifying appropriate incentives for industry to use machine tools and other capital assets produced in the United States. Comments in response to this notice will also be accepted. If there appears to be sufficient interest in this incentive program, the Department may schedule a public hearing.

Once suitable incentives are identified, DoD will structure the incentive program and publish an interim rule implementing the incentive program.

Questions on this matter should be directed to Susan Hildner at (703) 795-4258 or e-mail susan.hildner@osd.mil.

GAO REPORT TO CONGRESSIONAL COMMITTEES (MARCH 2004) DEFENSE ACQUISITIONS—ASSESSMENTS OF MAJOR WEAPON PROGRAMS

The General Accounting Office (GAO) recently completed its assessment of 51 defense programs ranging from the Missile Defense Agency's Airborne Laser to the Army's Warfighter Information Network. The report stated that most of the programs assessed proceeded with less knowledge at critical junctures than suggested by best practices, although several came close to meeting best practice standards. GAO also found that programs generally did not track statistical process control data, a key indicator for production maturity. Program stakeholders, according to the report, could use these assessments to recognize the gaps in knowledge early and take advantage of opportunities for constructive intervention—such as adjustments to schedule, trade-offs in requirements, and additional funding.

GAO has summarized the results of its assessments in a two-page format. Each two-page assessment contains a profile of the product that includes a description; a timeline of development; a baseline comparison of cost, schedule, and quantity changes to the program; and a graphical and narrative depiction of how the product development knowledge of an individual program compared to best practices. Each program office submitted comments, and they are included with each individual assessment as appropriate.

View the full product, including the scope and methodology, at < http://www.gao.gov/cgi-bin/getrpt?GAO-04-248 > .

RELIABILITY AS A KEY PERFORMANCE PARAMETER (KPP)

In a March 27 memorandum to key Army leaders, commanders, directors, program executive officers, and direct reporting program offices, Vice Chief of Staff of the Army George W. Casey Jr., directed that effective immediately, reliability will be assessed as a potential Key Performance Parameter (KPP) during the Joint Capabilities Integration and Development System (JCIDS) process, to include the necessary JCIDS analyses and development of Capabilities Documents. The intent of the policy, the memo stated, is to improve reliability of Army systems and materiel, enhance combat power, improve survivability for the soldier, and reduce logistics demand.

The point of contact for Reliability as a KPP is Donald C. Crissup, SAAL-LP, (703) 604-7421, DSN 664-7421, or e-mail: donald.crissup@us.army.mil.

AGB'S ROLE INCREASES WITH NEW CHARTER

Linda Polonsky-Hillmer

On April 9, Michael Wynne, under secretary of defense (acquisition, technology & logistics), opened the Acquisition Governance Board

Michael Wynne (center), acting under secretary of defense (acquisition, technology and logistics), is pictured with Deidre Lee, director, defense procurement and acquisition policy (DPAP), and Mark Krzysko, deputy director, DPAP electronic business, as they view the array of awards and trophies earned by DoD programs within the Acquisition Domain over the past year.

Photo by Ashley Rinehart

(AGB)'s first meeting since the Board's re-chartering on March 15. "Senior Procurement Executives have been participating in the AGB since it was chartered [March 21, 2003]," said Wynne. "This group has been realigned to reflect participation by the Component Acquisition Executives and to document the scope of the AGB as being the acquisition process as a whole, rather than solely focusing on procurement."

The AGB oversees management of the Acquisition Domain information technology (IT) portfolio to ensure IT capital investments are aligned with DoD business goals. The Board also provides guidance to the Acquisition Domain with respect to portfolio management, business process improvements, architecture products, joint initiatives and Component-level programs.

Acquisition vs. Procurement: What Distinguishes Them?

The terms acquisition and procurement are often used interchangeably even though there is a distinct difference between the two. Acquisition encompasses lifecycle management from concept to disposal:

- Concept refinement
- Technology development
- System development and demonstration
- Production and deployment
- Operations
- Benefits analysis and support

Acquisition also includes the processes associated with science and technology; program formulation; planning, design, development, and purchasing of materiel, systems, and goods and services; resource management; test and evaluation; and systems sustainment.
Procurement, on the other hand, can be looked at as a subset of acquisition. Procurement is the actual purchasing of goods and services by contract, purchase card, grant, intra-governmental transaction, or other means of sourcing.

The AGB will now tackle issues that encompass the entire acquisition process to ensure the goals of the Acquisition Domain are met.

Why Domains? The Answer Lies in the BMMP

The business transformation of the DoD is guided through the Business Management Modernization Program (BMMP). The BMMP is identifying a system of business process improvements that will be incorporated into an overarching enterprise architecture framework. [***Editor's note**: For more information on the BMMP, see* *"Say Goodbye to the Old Ways of Doing Business And Hello to the Business Management Modernization Program" on page 56*.)

Identifying the processes, systems and technical requirements of the future architecture and managing the transition to that future state is an enormous undertaking. There are seven domains that encompass the system of business processes:

- Accounting and Finance
- Acquisition
- Human Resources Management
- Enterprise Information Environment
- Installations and Environment
- Logistics
- Strategic Planning and Budgeting

The AGB will help to ensure the goals of the Acquisition Domain are achieved, including:

- Implementing enterprise systems and identifying and retiring unique/outdated systems
- Deploying Version 4.2 Increments 2 and 3 of the Standard Procurement System to current and future users (to include the Defense Contract Management Agency)
- Deploying a fully-operational Wide Area Work Flow (WAWF) Program to all Components by April 2005.

AGB Membership Broadens to Embrace Entire Acquisition Community

Deidre Lee, director, defense procurement and acquisition policy (DPAP), is the chair of the AGB. She is assisted by the executive secretary, Mark Krzysko, deputy director, DPAP, electronic business. Members of the AGB not only represent their respective components on Acquisition Domain issues, they also help to resolve issues raised by the Joint Acquisition Electronic Business Oversight Board (JAEBOB) and provide advice to Lee regarding Acquisition Domain governance. The members are:

- Assistant secretary of the Army (Acquisition, Logistics and Technology)
- Assistant secretary of the Navy (Research, Development and Acquisition)
- Assistant secretary of the Air Force (Acquisition)
- Acquisition executive, United States Special Operations Command
- Senior procurement executive, Defense Logistics Agency
- Director, Defense Information Systems Agency
- Director, Defense Contract Management Agency

- Director, Force Structure, Resources and Assessment Directorate (J-8)
- Director, Acquisition Resources And Analysis
- Director, Defense Finance and Accounting Service
- Representative for other defense agencies

The new members are in addition to the original senior procurement executives serving as representatives on the AGB.

In addition to the members of the AGB, there are eight associates who support strategic directions of the AGB. They facilitate cross-domain coordination and provide insight into specific projects that are part of the Acquisition Domain or cross multiple domains. AGB associates are:

- President, Defense Acquisition University
- Assistant secretary of defense, network information and integration/chief information officer, DoD
- Under secretary of defense (comptroller)/chief financial officer, DoD
- Deputy under secretary of defense (logistics and materiel readiness)
- Deputy under secretary of defense (installations and environment)
- Deputy director of plant, property, and equipment policy
- Deputy under secretary of defense (systems planning and budgeting)
- Special assistant, under secretary of defense (acquisition, technology & logistics)

For further information, contact Lisa Romney at lisa.romney@osd.mil or Diane Morrison at diane.morrison@osd.mil of the Defense Procurement and Acquisition Policy, Electronic Business Office.

DOD 2004-2005 COALITION WARFARE PROGRAM MANAGEMENT PLAN

Acting Under Secretary of Defense (Acquisition, Technology and Logistics) Michael Wynne has released for publication the DoD 2004-2005 Coalition Warfare Program Management Plan. The plan outlines how the Defense Department will integrate coalition-enabling solutions into existing and planned U.S. weapon programs. According to the published plan, DoD's "program focuses not only on short-term, interoperability-enhancing solutions, but also on early identification of coalition solutions to long-term interoperability issues (architectures, coalition requirements, major system acquisition) with a broad range of potential coalition partners." View the plan at <http://www.acq.osd.mil/ic/cwp/CW_MagtPlan.pdf>.

OFFICE OF MANAGEMENT AND BUDGET (MARCH 5, 2004)

MANAGER'S GUIDE TO COMPETITIVE SOURCING

The Federal Acquisition Council (FAC), in collaboration with the Office of Management and Budget, has published *Manager's Guide to Competitive Sourcing,* which is a compilation of best practices to help agency officials manage their competitive sourcing efforts in the most strategic and results-oriented manner possible. The best practices reflect the Administration's commitment to the long-term success of public-private competition as a resource tool for improving performance and decreasing costs to taxpayers.

To read the updated version of the guide, go to <http://www.results.gov> and click on "Competitive Sourcing Best Practices."

DEPUTY SECRETARY OF DEFENSE
1010 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-1010

APR 1 2004

MEMORANDUM FOR SECRETARY OF THE ARMY
SECRETARY OF THE NAVY
SECRETARY OF THE AIR FORCE
CHAIRMAN, JOINT CHIEFS OF STAFF
DIRECTORS OF DEFENSE AGENCIES

SUBJECT: Use of Operation and Maintenance Appropriations for Construction During Fiscal Year 2004

This memorandum implements section 2808 of the National Defense Authorization Act for Fiscal Year 2004, and provides guidance on the use of operation and maintenance appropriations for construction activities pursuant to that section.

Section 2808 authorizes the Secretary of Defense to use funds available for operation and maintenance to carry out military construction projects outside the United States that the Secretary determines meet each of the following conditions:

- The construction is necessary to meet urgent military operational requirements of a temporary nature involving the use of the Armed Forces in support of a declaration of war, the declaration by the President of a national emergency under section 201 of the National Emergencies Act (50 U.S.C. 1621), or a contingency operation.
- The construction is not carried out at a military installation where the United States is reasonably expected to have a long-term presence.
- The United States has no intention of using the construction after the operational requirements have been satisfied.
- The level of construction is the minimum necessary to meet the temporary operational requirements.

The total amount of construction projects that can be carried out under section 2808 using operation and maintenance funds is limited to $200 million. The Secretary of Defense may waive this limitation if the Secretary determines that it is vital to national security, and notifies Congress of the reasons for the waiver.

Section 2808 also requires the Secretary of Defense to submit to the cognizant congressional committees, within seven days after operation and maintenance funds are obligated for a construction project, notice that includes the following:

- Certification that the conditions specified in subsection (a) of section 2808 are satisfied with regard to the construction project.

- A description of the purpose for which operation and maintenance funds are being obligated.
- All relevant documentation detailing the construction project.
- An estimate of the total amount obligated for the construction project.

In addition, the Secretary of Defense must submit, not later than 30 days after the end of each quarter of fiscal year 2004, a report on obligation and expenditure of operation and maintenance funds during that quarter for construction projects.

Accordingly, the following procedures will apply to the use of operation and maintenance appropriations for construction activities during FY 2004 under section 2808:

- The Military Department or Defense Agency will submit candidate construction projects to USD(C). The request will include a description and estimated cost of the project (use attached format and provide DD 1391 if available). The request will also include a certification by the Secretary of the Military Department (or his designee) or Director of the Defense Agency that the project meets the conditions in subsection (a) of section 2808.
- The USD(C) will review the candidate projects in coordination with the USD(AT&L) and the Director of Joint Staff.
- The USD(C) will notify the Military Department or Defense Agency when to proceed with the construction project.
- Not later than 24 hours after the obligation of operation and maintenance funds for the project, the Military Department or Defense Agency will fax the attached form (with the bottom portion completed) and DD 1391 to the USD(C). Explain any differences from the original request.
- Not later than 15 days after the end of each quarter of FY 2004, the Military Department or Defense Agency will submit to the USD(C) a spreadsheet showing obligation and expenditure for each construction project during that quarter. Explain any adjustments to the data previously submitted to USD(C).

The Under Secretary of Defense (Comptroller) is delegated the authority and assigned the responsibility of the Secretary of Defense to make such determinations and certifications, issue such waivers, and submit such notifications and reports as may be required under section 2808.

Enclosure

cc: USD(AT&L)
USD(C)

Editor's note: To view and print the enclosure to this memorandum, go to the Director, Defense Procurement and Acquisition Policy Web site at <http://www.acq.osd.mil/dpap/>.

ACQUISITION, TECHNOLOGY AND LOGISTICS

THE UNDER SECRETARY OF DEFENSE
3010 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-3010

FEB 20, 2004

MEMORANDUM FOR: SEE DISTRIBUTION

SUBJECT: Radio Frequency Identification (RFID) Policy—UPDATE

This memorandum updates the "Radio Frequency Identification (RFID) Policy," dated October 2, 2003. This policy update provides revised business rules for the use of high data capacity active RFID (Attachment 1) and an initial set of business rules for the implementation of passive RFID and the use of the Electronic Product Code (EPC)-compliant tags within the Department of Defense (DoD) supply chain (Attachment 2). This policy and associated business rules will continue to be refined as we implement the active RFID capability and pilot the passive RFID capability over the next six months.

DoD Components will continue maximum effort to immediately implement and expand the use of high data capacity active RFID currently employed in the DoD operational environment. DoD Components will also plan for a January 1, 2005, implementation of the passive RFID business rules. These rules, which are in Attachment 2, include the requirement for DoD suppliers to put passive RFID tags on the cases and pallets of materiel shipped to the DoD as well as on the packaging of all items requiring a Unique Identification (UID). DoD Components will establish an initial capability to read passive RFID tags and use the data at key sites by January 2005. The Defense Logistics Agency has committed to making the strategic distribution centers (San Joaquin, CA, and Susquehanna, PA) capable of reading passive RFID attached to shipments received from suppliers and applying passive RFID tags on shipments to DoD activities and units by that date.

A key component to implementing RFID throughout our supplier base is the publication of a Defense Federal Acquisition Regulation (DFAR) rule governing the application of RFID to the case/pallet/item packaging for materiel purchased by the Department. To that end, I have directed the Deputy Under Secretary of Defense (Logistics and Materiel Readiness) (DUSD(L&MR)) to work with Defense Procurement and Acquisition Policy to develop a proposed rule for publication in the Federal Register by May 2004. The rule will require passive RFID tagging at the case, pallet, and UID item packaging level for all new solicitations issued after October 1, 2004, for delivery of materiel on or after January 1, 2005.

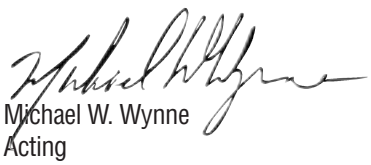
Use of RFID to streamline our supply chain includes the integration of RFID event data into the DoD logistics information systems. To achieve this goal, the Assistant Deputy Under Secretary (Logistics Systems Management) will determine the requirements needed to integrate the RFID data into the DoD data environment in consonance with the Business Enterprise Architecture. The effort will include the integration with legacy/modernized logistics systems, middleware translation requirements, architecture and enterprise infrastructure requirements, and data security issues. The results of this effort will be available March 2004 and will assist DoD in decisions for legacy systems support as well as new systems development across the DoD.

In order to provide a capability to purchase passive RFID technology and leverage the purchasing power across the Department, the Army's Program Executive Office Enterprise Information Systems (PEO EIS) office will establish a multi-award contract mechanism to procure EPC-compliant technology. Contracts will only be awarded to vendors who meet the published EPC tag specification.

Much remains to be completed prior to issuing the final RFID policy in July 2004. This requires your continued strong support of an RFID policy development effort led by the Assistant Deputy Under Secretary (Supply Chain Integration). The RFID IPT will complete the following tasks and resolve the remaining issues outlined below.

- Finalize DoD requirements for use of the EPC (March 2004)
- Finalize DoD passive RFID technical specifications—tags and infrastructure (March 2004)
- Identify RFID budget requirements (March 2004)
- Conduct a second DoD RFID Summit for Industry (April 2004)
- Publish a proposed DFARS Rule for the application of passive RFID tags at point of origin (manufacturer/vendor) on items procured by DoD (May 2004)
- Complete an analysis of the initial RFID implementation projects (June 2004)
- Complete an analysis of applicable regulations and other requirements, such as Hazards of Electromagnetic Radiation to Ordnance (HERO) certification (June 2004)
- Provide a final RFID policy and implementation strategy (July 2004)
- Implement passive RFID contract schedule (August 2004)
- Develop an education and training plan for DoD RFID (September 2004)
- Issue final DFARS rule effective October 1, 2004 (September 2004)

We will continue to partner with our suppliers on this critical initiative. An RFID-enabled DoD supply chain will reduce our operating costs, allow us to refocus critical manpower resources, and will provide a key enabler for the asset visibility support needed by our warfighters. Your efforts are vital to our success in meeting this requirement. Additional information is available at http://www.acq.osd.mil/log/rfid/index.html.



Michael W. Wynne
Acting

Attachments:
As stated

Editor's note: To view the distribution and attachments to this memorandum, go to the DoD Supply Chain Integration Web site at <http://www.acq.osd.mil/log/logistics_materiel_readiness/organizations/sci/rfid/rfid_policy.html>.

THE UNDER SECRETARY OF DEFENSE
3000 DEFENSE PENTAGON
WASHINGTON, D.C. 20301-3000

ACQUISITION, TECHNOLOGY AND LOGISTICS

March 30, 2004

MEMORANDUM FOR: SEE DISTRIBUTION

SUBJECT: Implementing Systems Engineering Plans in DoD—Interim Guidance

On February 20, 2004, the Acting Under Secretary of Defense for Acquisition, Technology and Logistics (USD AT&L) ***took a major step*** to reinvigorate DoD Systems Engineering by signing into policy a requirement that "All programs responding to a capabilities or requirements document…shall develop a Systems Engineering Plan (SEP) for Milestone Decision Authority (MDA) approval in conjunction with each Milestone review." This memorandum provides interim guidance concerning the purpose and content of these plans. I look forward to working with your representative to the new Systems Engineering Forum to capture best practices and mature this guidance over time. The SEP will be addressed more completely in future updates to the ***Defense Acquisition Guidebook***.

The purpose of the SEP is to lay out a plan that should guide all technical aspects of an acquisition program. Program managers should establish the SEP early in the program definition phase and update it at each subsequent milestone. It is intended to be a living document, tailored to the program, and a roadmap that supports program management by defining comprehensive systems engineering activities, addressing both government and contractor technical activities and responsibilities. The SEP describes the program's overall technical approach, including systems engineering processes; resources; and key technical tasks, activities, and events along with their metrics and success criteria. Integration or linkage with other program management control efforts such as integrated master plans, integrated master schedules, technical performance measures, and earned value management is fundamental to successful application.

There is no prescribed format for the SEP. However, it should address how systems engineering will support the translation of system capability needs into an effective, suitable product that is sustainable at an affordable cost. Specifically, a well-prepared SEP will address the integration of the technical aspects of the program with the overall program planning, systems engineering activities, and execution tracking to include:

- The systems engineering processes to be applied in the program (e.g., from a standard, a capability maturity model, or the contractor's process). Describe how the processes will be implemented and how they will be tailored to meet individual acquisition phase objectives. Describe how the SE processes will support the technical and programmatic products required of each phase.

- The system's technical baseline approach. Describe how the technical baseline will be developed, managed, and used to control system requirements, design, integration, verification, and validation. Include a discussion of metrics (e.g., technical performance measures) for the technical effort and how these metrics will be used to measure progress.

- Event-driven timing, conduct, success criteria, and expected products of technical reviews; and how technical reviews will be used to assess technical maturity, assess technical risk, and support program decisions. SEP updates shall include results of completed technical reviews.

- The integration of systems engineering into the program's integrated product teams (IPTs). Describe how systems engineering activities will be integrated within and coordinated across IPTs; how the IPTs will be organized; what SE tools they will employ; and their resources, staffing, management metrics, and integration mechanisms. Describe how systems engineering activities are integrated in the program's overall integrated schedules.

For programs where the USD(AT&L) is the Milestone Decision Authority (MDA), components shall submit the SEP to me at least 30 days before the scheduled Defense Acquisition Board (DAB) milestone review. My staff and I will evaluate each program's SEP in preparation for the DAB review and in support of Defense Systems' other acquisition and assessment support activities. I encourage all MDAs to take similar actions.

The referenced SEP policy is already in effect, so I urge you to distribute this guidance memorandum to your Program Executive Officers, Program Managers, and/or Systems Commanders. For addition clarification or guidance on SEP tailoring, please contact Mr. Mark Schaeffer, Director, Systems Engineering, (703) 695-7417, mark.schaeffer@osd.mil, or Mr. Bob Skalamera, Deputy Director, systems Engineering (Enterprise Development), (703) 695-2300, robert.skalamera@osd.mil.

Glenn F. Lamartin
Director, Defense Systems

DISTRIBUTION:
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DEPUTY DIRECTOR FOR FORCE STRUCTURE, RESOURCES & ASSESSMENT–J8

DEPARTMENT OF THE AIR FORCE
WASHINGTON, D.C. 20330-1060

APR 01 2004

OFFICE OF THE ASSISTANT SECRETARY

MEMORANDUM FOR SEE DISTRIBUTION

FROM: SAF/AQ

SUBJECT: Release of Interim Guidance 63-101, ***Operation of the Capabilities Based Acquisition System***

The attached Interim Guidance, ***Operation of the Capabilities Based Acquisition System,*** is effective immediately upon receipt, replacing AFI 63-101 dated 11 May 1994. The Interim Guidance significantly revises Air Force Acquisition Policy in response to changes in Department of Defense Directive (DoDD) 5000.1, ***The Defense Acquisition System***; DoDI 5000.2, ***Operation of the Defense Acquisition System*** (hereinafter referred to as the 5000 Series); acquisition-related activities in the Chairman of the Joint Chiefs of Staff Instruction CJCS 3170.1M, ***Joint Capabilities Integration and Development System***; CJCS Manual (CJCSM) 3170.01, ***Operation of the Joint Capabilities Integration and Development System***; the Assistant Secretary of the Air Force's Agile Acquisition policies; and revised AFPD 63-1, ***Capabilities Based Acquisition System***.

This Interim Guidance was developed in collaboration with efforts to revise AFI 10-601, ***Operational Capabilities Requirements***, and AFI 99-103, ***Capabilities Based Test and Evaluation***, to create an integrated process for rapidly meeting operator needs. The three documents are to be used together. Highlights of Interim Guidance 63-101 include: incorporation of the new pre-Milestone A concept from DoD 5000 to include Concept Refinement and Technology Development Strategy; introduction to Courses of Actions (COAs); the Expectation Management Agreement; and emphasis on Evolutionary Acquisition and Spiral Development, the preferred DoD and AF acquisition processes.

This Interim Guidance allows the opportunity for early feedback for the final publication of AFI 63-101 and will help expedite final coordination. Final publication is planned for 120 days after release of Interim Guidance. Formal coordination will occur prior to final publication.

The SAF/AQ point of contact for this Interim Guidance is Ms Sheryl Jennings, (703) 588-7154 or DSN425-7154. Please submit comments in accordance with the Comments Resolution Matrix (CRM) in attachment 3 via email to Ms Sheryl Jennings at: sheryl.jennings@pentagon.af.mil. The deadline for comments is 75 days after the release of the Interim Guidance.

MARVIN R. SAMBUR
Assistant Secretary of the Air Force
(Acquisition)

Attachments:
1. Distribution
2. Interim Guidance 63-101
3. CRM Template

Editor's note: To view the attachments to this memorandum, go to the U.S. Air Force Acquisition Center of Excellence (ACE) Web site at http://www.safaq.hq.af.mil/ACE/.

OFFICE OF FEDERAL
PROCUREMENT POLICY

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

March 11, 2004

MEMORANDUM FOR THE FEDERAL ACQUISITION COUNCIL
SENIOR AGENCY PROCUREMENT EXECUTIVES

FROM: Robert A. Burton
Associate Administrator

SUBJECT: Revised FAR Process

The Federal Acquisition Regulatory Council has established a revised process for developing changes to the Federal Acquisition Regulation (FAR). While maintaining the benefits of full deliberation and agency coordination provided by the twenty-year-old former process, the Council expects the revisions to increase responsiveness to requests for FAR changes from both the public and government.

Five newly formed teams replace the twenty-eight standing committees formerly responsible for drafting recommended FAR changes. The teams are composed of representatives from military and civilian agencies. Each team chair is organizationally accountable to one of the agencies that make up the Council. For the first time, representatives from the Office of Federal Procurement Policy are participating as permanent members of the teams in an advisory capacity.

The Civilian Agency Acquisition Council (CAAC) and the Defense Acquisition Regulations Council (DAR Council) direct the activities of the teams. When appropriate, the Council will provide upfront policy guidance on significant matters. The CAAC and DARC will review team recommendations concurrently, a change from past practice when reviews were done sequentially.

The new team structure will significantly reduce the resources required to make a FAR change, and at the same time, enhance the efficiency of the FAR rulemaking process.

Attending a February 2004 Performance Support Workshop in support of the DoD Small and Disadvantaged Business Utilization office and the Small Business Administration are from left: DAU President Frank Anderson Jr.; Linda Oliver, deputy director, DoD Small and Disadvantaged Business Utilization office; and Eugene Cornelius, former associate director for business development, Small Business Administration.

Photo by Army Sgt. Timothy Stovall

SMALL AND DISADVANTAGED BUSINESS CERTIFICATION PROCESS WORKSHOP "PERFORMANCE SUPPORT OF THE DOD AT&L WORKFORCE IN ACTION"

Marcia Richard

On Feb. 24 and 25, the Defense Acquisition University (DAU) hosted a successful Performance Support workshop in support of the DoD Small and Disadvantaged Business Utilization (DoD SADBU) office and the Small Business Administration (SBA). The workshop, held in the DAU Management Deliberation Center and facilitated by Bill McGovern, Curricula Development and Support Center (CDSC), was conducted to assist the Small Business Administration (SBA) in its first steps to re-engineer the small and disadvantaged business certification process.

The SBA currently provides the SDB certification service for 28 federal agencies of which DoD is its largest paying customer. DAU President Frank Anderson Jr., participated for several hours on both days of the workshop and shared many of the challenges and success stories that DAU has experienced as it progressed through its transformation over the past 3½ years. Many of the DAU experiences were similar in nature to what the SBA is currently experiencing, and representative of issues that organizations are forced to deal with as they transform.

Air Force Lt. Col. Scott Miller from the DAU Midwest Region participated in the workshop and briefed the LEAN concept (eliminating waste from process/procedures) to the group. Army Col. Gus Mancuso from the Army's SADBU office was a very active participant in the workshop bringing with him the added insight of the warfigher's perspective. Also participating in the workshop was Linda Oliver, deputy director, DoD SADBU office, and Sharon Drago, assistant director DoD SADBU and a member of Oliver's staff. Attending from the SBA was Eugene Cornelius, deputy administrator, Office of Business Development and 16 of his staff who are directly involved with the SDB certification process. Marcia Richard, CDSC and project manager for the effort was also a participant.

DAU has agreed to assist the SBA in a follow-on session, phase two of the SDB certification re-engineering effort: *Implementation*. For more information on the certification process, contact Marcia Richard at marcia.richard@dau.mil.

Richard is the associate director for performance support, DAU Curricula Development and Support Center, Fort Belvoir, Va.

AMC'S ANNUAL NATIONAL INFORMATION ASSURANCE (IA) CONFERENCE & EXPOSITION (JULY 7-8, 2004)

The Army Materiel Command (AMC), in conjunction with Technology Forums, Inc., will hold its Annual National Information Assurance (IA) Conference and Exposition July 7-8, 2004, at Rock Island, Ill. Conference planners are developing an IA conference targeted toward the needs of AMC, including panel discussions and presentations on communications, information security, and wireless technology. For further information on the conference, watch the conference

Web site at <https://www.technology forums.com/upcoming_events/>. Information will be posted as it becomes available.

ENERGY 2004 WORKSHOP (AUG. 8-11, 2004)

The Energy 2004 workshop, scheduled for August 8-11 in Rochester, N.Y., is designed for federal, state, local, and private sector energy managers, energy service companies, utilities, procurement officials, engineers, and other energy professionals. Topics that will be covered include establishing or improving an energy management program, procuring renewable and energy-efficient products and services, and incorporating sustainable design concepts. For more information, please visit the Energy 2004 Web site at <http://www.energy2004.ee.doe.gov/>.

SOLE 2004: "FUTURE LOGISTICS: THE INTEGRATED ENTERPRISE" (AUG. 29–SEPT. 2, 2004)

SOLE, The International Society of Logistics, will hold SOLE 2004, its 39th Annual International Conference and Exhibition from Aug. 29 through Sept. 2, 2004, at the Norfolk Marriott Waterside in Norfolk, Va. This year's conference theme is "Future Logistics: The Integrated Enterprise." Army Brig. Gen. Scott G. West, quartermaster general of the United States Army and commandant of the U.S. Army Quartermaster Center will serve as both the defense chair and the conference host.

Joining him as the industry chair is Clayton (Clay) M. Jones, chairman, president, and chief executive officer of Rockwell Collins, selected in January 2004 by *Forbes* magazine as the "best managed aerospace and defense company in America." Senior leaders from the defense, industry, academic, and business communities will participate throughout the conference, both as plenary and panel session members. For more information, visit SOLE's Web site at <http://www.sole.org/conference.asp> or call 301-459-8446.

ASTD BENCHMARKING FORUM SPRING 2004 MEETING
MANAGING WITH METRICS: DATA-DRIVEN WORKPLACE LEARNING AND PERFORMANCE

Christina Cavoli

After a hefty investment of financial and human capital, your new training program has finally gotten off the ground, and now your boss wants to know: Where's the return on our investment? If you've done your homework, you can respond with credible and meaningful data that can pinpoint how that investment in training and performance is paying off.

At the ASTD Benchmarking Forum "Managing with Metrics: Data-Driven Workplace Learning and Performance," held at Defense Acquisition University April 28-29 and hosted by Boeing and DAU, learning and performance professionals gathered with this focus in mind. Providing the big picture presentation was Reza Sisakhti, Director, Learning & Performance Practice, Productivity Dynamics, who enumerated steps for capturing the impact of training in a work environment. Titled "Managing with Metrics at a Macro and Micro Level: Experiences and Lessons Learned in Multiple Organizations," the presentation outlined frameworks for measuring the overall benefits of training initiatives (macro-level perspective) and capturing the bottom-line business impact of particular, individual strategic initiatives (micro-level perspective).

"I don't have a silver bullet," Sisakhti admitted, "just a lot of experience in measuring these things." He demonstrated this experience with an overview of how to prepare the appropriate metrics that allow various types of training and education to be evaluated. "You need to really do your homework," Sisakhti said, adding that anticipating the measurement criteria before deploying any training is the key to creating successful metrics.

Methods of measuring the impact of training must be tailored to fit specific circumstances. From a micro perspective, these measurements vary between easily established, fixed criteria to more subjective evaluations. For example, evaluating skill-building or technical training is straightforward. Such training is an easy sell: it provides a new procedure, tool, or technique, such as teaching a technician to install a cable, that results in the establishment of a solid skill set. If the training works, the results are easily quantifiable; management can count the number of technicians now trained to install cables, or measure how much faster cables can be installed after new training is conducted.

Measuring context-dependent initiatives, such as management of training or leadership skills, is more subjective. Such training cannot be applied uniformly; not everyone will apply the new skills and styles in the same way. Establishing uniform measurements of effectiveness results in ambiguous, meaningless goals such as "increased production" or "increased profits" that are too far removed from the actual training to be of value.

To meaningfully capture the results of such training, measurements must shadow how the learned skills are being used; measurements must be contextual, and applied on a case-by-case basis. After teaching management skills, trainers must investigate how the skills were then employed. Did managers focus the new skills on teamwork? On mentoring? On improving communication? Where and how did different groups receiving the training use the new knowledge? Individualized follow-up may be necessary to track how people used new skills. This kind of tracking suggests that context-dependent initiatives need a menu of measurement criteria, not pre-determined specific outcomes.

If such tailored tracking seems unwieldy, Sisakhti provided an action plan. After being exposed to education and new ideas, members of the group each developed a three-month action plan that outlined how the new skills could be leveraged in their jobs. After 45 days, interviews are conducted to solicit feedback on the implementation and success of these action plans. Interviews are conducted again after three months. Such feedback can then be collected and reviewed, and the impact of the training can be measured.

No matter the type of training, it is essential to establish what the criteria are for evaluating success. Sisakhti added that setting up a measurement system based on the client's own language and technical vocabulary is also critical in effectively capturing the right measurements. Again, adequate preparation before deploying the training is key.

Infrastructure investment initiatives require yet another approach. For example, if an independent Web-based learning system has been established, the content and skill sets being taught must be evaluated, but the portal itself needs also be evaluated. If the infrastructure is not supporting the training, that must be captured by the appropriate metrics.

Moving to a macro view adds yet another layer of complexity. After considering all the micro initiatives, a company may question the overall impact on the bottom line. All the seminars, ongoing training, new infrastructures to improve the learning environment—what does it all add up to?

A macro perspective must provide a means of measuring the aggregate impact of multiple initiatives and the cumulative impact of total investment. One solution to the challenge of measuring the overall impact of isolated learning initiatives is a time series measurement design. Such a framework selects a "unit of analysis"—managers, sales people, service professionals, departments—who have all completed multiple initiatives, and measures their progress over time to assess the overall impact of training. Metrics to consider for such a design include employee loyalty, retention, innovation, customer satisfaction, and financial and industry benchmarks.

Sisakhti added a further level for consideration: the organizational perspective. The learning function itself is an organization in its own right; metrics are often necessary to create a balanced scorecard for the learning organization.

Too often, lower-level metrics aimed at micro initiatives focus on the whole, creating criteria that are too broad or far removed to effectively measure the results of training. Micro initiatives demand specifically tailored metrics. A focus on the big picture, however, remains equally important; a macro perspective is necessary to provide answers when a CEO asks, "What are we finally getting for all our investment?" Planning must be done in advance of deploying training to establish a soundly structured system to capture information for both the micro and macro perspectives.

Cavoli is a freelance writer/editor providing contract support to Defense AT&L.

7TH ANNUAL SYSTEMS ENGINEERING CONFERENCE (OCT. 25-28, 2004)

A major conference focusing on Mission Areas and Capabilities of Defense Systems, including Interoperability, Supportability, and Reducing Total Ownership Costs, will be convened in Dallas, Texas, Oct. 25-28, 2004, under the auspices of the National Defense Industrial Association, Systems Engineering Division. The conference is held in conjunction with the Director, Systems Engineering, Office of the Under Secretary of Defense for Acquisition, Technology and Logistics (AT&L), Defense Systems, with technical co-sponsorship by the International Council on Systems Engineering (INCOSE).

For more information or to register, go to <http://register.ndia.org/interview/register.ndia?#September2004>.

DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 3, 2004)

SECRETARY OF DEFENSE ANNOUNCES ENVIRONMENTAL AWARD WINNERS

Secretary of Defense Donald H. Rumsfeld today announced the winners of the 2003 Secretary of Defense Annual Environmental Awards. The winners and categories for which they are recognized are:

Columbus Air Force Base, Miss., Natural Resources Conservation—Small Installations

Gregory Lee, 347th Civil Engineering Squadron, Moody Air Force Base, Ga., Natural Resources Conservation - Individual Team

Marine Air Ground Task Force Training Command, Twentynine Palms, Calif., Cultural Resources Management—Installation

U.S. Naval Support Activity Bahrain, Environmental Quality—Non-Industrial Installation

Lt. Col. Ronald Swafford, Hawaii Army National Guard, Fort Ruger, Hawaii, Environmental Quality—Individual/Team

Robins Air Force Base, Ga., Pollution Prevention—Industrial Installation

Tinker Air Force Base, Okla., Environmental Restoration—Installation

45th Space Wing, Patrick Air Force Base, Fla., Environmental Restoration—Individual/Team

Aeronautical Systems Center, Wright-Patterson Air Force Base, Ohio, Environmental Excellence in Weapon System Acquisition—Team

Recognizing excellence in environmental management is a crucial element in Department of Defense efforts to support the twin imperatives of producing the best-trained military force in the world while providing the best environmental stewardship possible. Each year, the secretary of defense honors installations, teams and individuals for outstanding environmental management by military and civilian personnel, at both domestic and overseas bases, to sustain military readiness and training and operational capabilities.

Environmental awards are given for six categories:

- Natural Resources Conservation
- Cultural Resources Management
- Environmental Quality
- Pollution Prevention
- Environmental Excellence in Weapon System Acquisition
- Environmental Restoration.

The environmental programs for these categories support the U.S. military mission, protect our national heritage, and promote quality of life.

Additional information on the environmental awards is available at <https://www.denix.osd.mil>.

DEPARTMENT OF DEFENSE NEWS RELEASE (MARCH 8, 2004)

DOD TO AWARD $8.4 MILLION FOR SCIENCE AND ENGINEERING RESEARCH

The Department of Defense announced today plans to award $8.4 million to 15 academic institutions in 12 states to perform research in science and engineering fields important to national defense.

Twenty projects were competitively selected under the fiscal 2004 Defense Experimental Program to Stimulate Competitive Research (DEPSCoR), which is designed to expand research opportunities in states that have traditionally received the least funding in federal support for university research. The average award will be approximately $420,000. All awards are subject to the successful completion of negotiations between DoD and the academic institutions.

Academic researchers in Alabama, Alaska, Arkansas, Delaware, Hawaii, Idaho, Kansas, Kentucky, Maine, Montana, Nebraska, Nevada, North Dakota, Oklahoma, Puerto Rico, South Carolina, South Dakota, the U.S. Virgin Islands, Vermont, West Virginia, and Wyoming were eligible to receive awards under this competition.

The Air Force Office of Scientific Research, the Army Research Office, and the Office of Naval Research solicited proposals using a defense-wide broad agency announcement. The announcement was published on the Internet and accessed by the DEPSCoR state committees, which solicited and selected projects for each state's proposal. In response, 20 state proposal packages consisting of 180 projects were submitted, requesting more than $101.5 million.

The list of projects selected for fiscal 2004 DEPSCoR funding can be found on the Web at <http://www.defenselink.mil/news/Mar2004/d20040308cr.pdf>.

DEPARTMENT OF DEFENSE NEWS RELEASE (MARCH 9, 2004)

TRANSFORMATIONAL INSTRUMENTATION RESEARCH GRANTS ANNOUNCED

The Department of Defense announced today the selection of Rice University, Drexel University, and University of California at Berkeley to receive research grants, as a part of its effort to transform research programs to exploit emerging scientific opportunities to be more responsive to DoD needs.

The three awards total approximately $2.8 million in fiscal 2004, and up to $14.7 million over five years. The research grants are a part of the DoD Multidisciplinary University Research Initiative (MURI) program, which focuses on multidisciplinary research themes vital to national defense. All awards are subject to the successful completion of negotiations between DoD research offices and the academic institutions.

The laboratory instrumentation design research is focused on a systematic and sustained effort aimed at developing the next generation of research tools, as well as a new cadre of scientists and engineers who are experts in the art and science of building instruments, devices, and equipment. The invention and development of new research instruments will lead to advances in scientific innovation and to the discovery of new things that have yet to be explained, such as fast electron dynamics in semiconductors.

The selected awards include a multimodality spectroscope for nanoscale optical imaging the structure of peptides, proteins, and viruses in their native environment; remote nondestructive testing and measurement of power systems for isolating and diagnosing failures in the power grid; and laser instrumentation for attosecond experimentation to probe the fast electron dynamics in electronic devices. These new research tools will revolutionize scientific research and transform our research capabilities to address the urgent need for understanding biological responses to chem-bio agents and for understanding electronic devices for information technology.

Today's announcement is the result of a rigorous merit competition as a part of the DoD MURI program. The awards will provide support for research, graduate students, and laboratory instrumentation development. These awards represent DoD's long-term commitment to supporting basic science research and transformational initiatives.

DEPARTMENT OF DEFENSE NEWS RELEASE (MARCH 23, 2004)

STANDARDIZATION PROGRAM PRESENTS ANNUAL ACHIEVEMENT AWARDS

Four individuals and three teams have received awards from the Defense Standardization Program Office (DSPO) for outstanding contributions to the Department of Defense last fiscal year. The awards were presented March 16, during a ceremony at The National Conference Center, Lansdowne, Va.

Since 1987, DSPO has recognized individuals and organizations that have effected significant improvements in quality, reliability, readiness, cost reduction, and interoperability through standardization. The DSP mission is to identify, influence, develop, manage, and provide access to standardization processes, products, and services for warfighters and the acquisition and logistics communities. In addition, the program promotes interoperability and assists in reducing total ownership cost and in sustaining readiness.

Following are the Defense Standardization Program award recipients for 2003:

INDIVIDUALS

- Alfredo J. Berard, senior electronics engineer, 46th Test Wing/Flight Division, Eglin Air Force Base, Fla. Berard directed an international team of industry and tri-Service DoD experts in the field of flight test telemetry.
- James C. Byrd, Avionics Systems Engineering Branch, Wright-Patterson Air Force Base, Ohio. Byrd led the effort by the Air Force to develop revision D to tri-Service coordinated military standard 1760, which provides interoperability of weapons across a variety of aircraft.
- Kenneth Henz, Defense Logistics Agency, Defense Energy Support Center, Fort Belvoir, Va. Henz took small databases and turned them into an automated data processing system that gathers and tracks trends in petroleum quality data.
- Clem H. Huckins, Electronic Systems Center, Hanscom Air Force Base, Mass. Huckins led a group of technical experts in the development of standardization agreement 4607, the NATO Ground Moving Target Indicator Format.

TEAMS

- The Joint Strike Fighter Program Office, Air Vehicle Directorate, Weapons Integration Integrated Product Team—Created a Joint Service store certification guide that significantly reduced unique weapon require-

ments. Members are: Navy Capt. David L. Prater, Air Force Capt. John R. Brady, Charles D. Wagner, Mark S. Jones, and John D. Fahnestock.

- Navy/Air Force/Aerospace Industry Association—Developed a common international interactive electronic technical manual. Team members are: Joseph Fuller, Steve Holloway, Eric Jorgensen, Herve LeBoeuf, and Dennis Raitz.
- Advanced Display System VME Migration—Standardized the hardware technology refresh configuration for ten Navy programs. Awardees are: Elaine Chandler, Stephen W. Froelich, Diane Jones, Evangelos Karagiorgis, and Art Peterson.

Additional information on the Defense Standardization Program, this year's awardees, and their accomplishments may be obtained by visiting the DSP Web site at <http://www.dsp.dla.mil/awards/awards-2003.htm> .

AMERICAN FORCES PRESS SERVICE (APRIL 1, 2004)

DOD PROGRESSES IN TRANSFORMING BUSINESS PRACTICES, STANDARDS

Donna Miles

WASHINGTON—The Defense Department is making steady progress in establishing a common set of business standards and practices that eliminates duplication and promotes information sharing, Pentagon financial and information officials told members of Congress March 31.

JoAnn Boutelle, the Pentagon's deputy chief financial officer, and Margaret Myers, principal office director for the deputy chief information officer, outlined DoD's business transformation efforts in prepared testimony to the House Subcommittee on Terrorism, Unconventional Threats and Capabilities.

Boutelle described "enormous progress" made during the past three years to overcome decades-old business practices in which the military services and DoD agencies operated with some 2,300 independent business systems that rarely interacted with other systems.

"Their information could not be easily exchanged nor aggregated for use by senior DoD leaders for decision making," Boutelle told the subcommittee. And because the systems were designed for specific functional purposes such as logistics, acquisition, or human resources, they rarely produced the data needed to generate "clean, auditable financial statements," she said.

Boutelle said sweeping changes introduced in 2001 center on eliminating redundant and incompatible systems by using more efficient business practices.

The Business Management Modernization Program, which Boutelle said will take several more years to complete, will result in an integrated network of systems within the department. "We are working to streamline, re-engineer and standardize our business practices, not simply improve the handling of information."

Myers called the program "an unprecedented effort to build a competitive advantage by transforming how we do defense business." Through business transformation, she said DoD "will expend fewer resources on business processes and systems (and) ensure that men and women in uniform have the business information they need—whenever and wherever they need it."

The department will be able to "inform Congress and the public, with confidence, on how we use our resources," Myers added.

To continue funding this evolution, the fiscal 2005 defense budget request includes $122 million for the program and what Boutelle called its centerpiece, the Business Enterprise Architecture. The architecture will serve as a blueprint to guide the department's diverse business communities in transforming their processes and systems, Boutelle explained.

"We are at a critical state in our transformation," Boutelle said. "We are off to a strong start, but much remains to be done."

Boutelle said aggressively implementing the Business Enterprise Architecture will drive the department to transform its business practices as rapidly as possible while improving its effectiveness in carrying out its national security mission.

The transformation, Boutelle said, "is as complex and difficult as any challenge the department has faced," but the stakes are enormous, affecting the way DoD manages billions of dollars in assets, liabilities, and appropriations.

"Transformation is absolutely crucial to DoD's ability to enhance America's national security in this era of terrorism and uncertainty," she said. "The speed, accuracy, interoperability, reliability, and dependability of our information resources are critical."

AMERICAN FORCES PRESS SERVICE (MAY 7, 2004)

WOLFOWITZ LAUDS TOP MILITARY INSTALLATIONS

Donna Miles

WASHINGTON—Deputy Defense Secretary Paul Wolfowitz praised the hard work and dedication of five military installations honored today as the "best of the best" as recipients of this year's Commander in Chief's Award for Installation Excellence.

Speaking at a Pentagon ceremony marking the 20th anniversary of the award, Wolfowitz credited the efforts and innovation of those who operate and maintain outstanding U.S. military installations around the world.

"Our installations are the home of U.S. combat power, and our installation assets are an inseparable element of the nation's military readiness and wartime effectiveness," he said.

Winners of the 2004 Commander in Chief Annual Award for Installation Excellence are:

- Army—Fort Stewart, Hinesville, Ga.
- Marine Corps—Marine Corps Air Station, Miramar, San Diego, Calif.
- Navy—Naval Air Engineering Station, Lakehurst, N.J.
- Air Force—Beale Air Force Base, Marysville, Calif.
- Defense Logistics Agency—Defense Supply Center Columbus, Ohio

Each installation was selected from others within its Service or agency for making the best use of its resources to sustain the mission, increase workforce productivity, and enhance the quality of life of its people, explained Ray DuBois, deputy undersecretary for installations and environment.

Wolfowitz said installations honored, and other outstanding installations throughout DoD, are carrying out the important job of "supporting and sustaining those great men and women" who are guarding the national defense and taking the fight to the enemy.

"We like to talk about combat power and about the 'point of the spear,'" Wolfowitz told the audience. "But a spear requires a long staff. And in the 21st century, that staff is made up of defense installations here at home and around the world."

He said the department's ongoing transformation effort includes, in addition to new technology and business practices, a commitment to sustaining, restoring, and modernizing its installation assets and services. This includes eliminating excess and obsolete facilities that plague U.S. military installations.

"Support for the warfighter requires a long-term, day-to-day commitment to deliver quality training, modern and well-maintained weapons and equipment; a safe, secure and productive workplace; a healthy environment; and good living conditions for servicemembers and their families," he said.

DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 20, 2004)

DOD AWARDS GRANTS TO MINORITY INSTITUTIONS

The Department of Defense announced today plans to award 25 grants totaling $6.5 million to 21 minority institutions. These grants represent the final phase of the fiscal 2004 DoD Historically Black Colleges and Universities and Minority Institutions Infrastructure Support Program. The grants will enhance programs and capabilities at these institutions in scientific disciplines critical to national security and the DoD.

This announcement is the result of merit competition for infrastructure support funding conducted for the Office of Defense Research and Engineering by the Army Research Office and the Air Force Office of Scientific Research. The solicitation resulted in 233 proposals in response to a broad agency announcement issued in September 2003.

The Army Research Office plans to award 12 equipment grants (ranging from $50,000 to $200,000) and 13 research grants (ranging from $300,000 to $500,000) with performance periods of 12 and 15 months respectively.

Awards will be made only after written agreements are reached between the department and the institutions.

The list of recipients is available online at <http://www.defenselink.mil/news/May2004/d20040520ins.pdf>.

DEPARTMENT OF DEFENSE NEWS RELEASE (MAY 12, 2004)

DEPARTMENT OF DEFENSE VALUE ENGINEERING ACHIEVEMENT AWARDS

Glenn F. Lamartin, director, Defense Systems, Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, presented the annual De-

partment of Defense Value Engineering Achievement Awards during a ceremony today at the Pentagon.

Value engineering is a systematic process to analyze functions to identify actions to reduce cost, increase quality, and improve mission capabilities across the entire spectrum of DoD systems, processes, and organizations. The Department of Defense Value Engineering Program continues to be an incentive for government participants and their industry counterparts to improve their joint value proposition by promoting innovation and creativity by seeking best value solutions as part of a successful business relationship. During fiscal year 2003, more than 3,280 in-house value engineering proposals and contractor-initiated value engineering change proposals were accepted with projected savings in excess of $858 million.

The Value Engineering Awards Program is an acknowledgment of outstanding achievements and encourages additional projects to improve in-house and contractor productivity. An award winner from each DoD component was eligible for selection in the following five categories: program/project, individual, team, organization, and contractor. Additional "special" awards were given to recognize innovative applications or approaches that expanded the traditional scope of value engineering use. Today's awards were presented to the following:

OSD

Special—Jay Mandelbaum, Program Manager, DoD Value Engineering

ARMY

Program/Project—Wayne Burke, precision fires deputy project manager
Individual—Charles Cebula, value engineering program manager, Program Executive Office, Command Control and Communications Tactical
Team—M821A1 and M889A1 HE Mortar Ammunition Team
Organization—Program Executive Office, Ammunition
Contractor—Olympic Associates Co.
Special—Brig. Gen. (P) Michael R. Mazzucchi, program executive officer, Command, Control and Communications Tactical
Special—Padre Island Storm Damage Reduction & Environmental Restoration Team, Galveston District, U.S. Army Corps of Engineers
Special—C2A1 Canister Packaging Team, U.S. Army Research, Development and Engineering Command

NAVY

Program/Project—Landing Craft, Air Cushion Service Life Extension Program, Amphibious Warfare Program (PMS377), program executive office, ships
Individual—William Ketchum, Naval Facilities Engineering Command
Team—Sigonella Re-Capitalization Program Team, Naval Facilities Engineering Command
Organization—Microwave Technologies Department, Crane Division, Naval Surface Warfare Center
Special—Mark Gindele, Naval Air Systems Command

AIR FORCE

Program/Project—Sensor Fuzed Weapon Program Office, AAC/YHS
Individual—Robert K. McGill, Ogden Air Logistics Center
Team—Battle Management (BMC3) & Mission Planning Program Offices, Electronic Systems Center

DEFENSE LOGISTICS AGENCY

Program/Project—C-5 Floorboard Project Team, Defense Supply Center Richmond
Individual—Andrew Utz, Defense Supply Center Columbus
Team—Value Engineering Team, Defense Supply Center Columbus
Organization—Defense Supply Center Richmond
Contractor—Outdoor Venture Corporation
Special—Value Management Team, Defense Supply Center Philadelphia

MISSILE DEFENSE AGENCY

Program/Project—Lower Tier Air and Missile Defense Project Management Office
Individual—Larry Easterwood, Terminal High Altitude Area Defense (THAAD) Program Office
Team—Command Value Engineering Team
Special—THAAD/PATRIOT Launcher Product Office/Team

DEFENSE FINANCE AND ACCOUNTING SERVICE

Program/Project—myPay Project Team
Team—Columbus Customer Support Office Team
Organization—Contract Pay Product Line

NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY

Contractor—BAE Systems (Lightyear 1)

Acquisition & Logistics Excellence

An Internet Listing Tailored to the Professional Acquisition Workforce

Surfing the Net

Acquisition Community Connection (ACC)
http://acc.dau.mil
Policies, procedures, tools, references, publications, Web links, and lessons learned for risk management, contracting, system engineering, total ownership cost (TOC).

Acquisition Reform Network (AcqNet)
http://www.arnet.gov/
Virtual library; federal acquisition and procurement opportunities; best practices; electronic forums; business opportunities; acquisition training; excluded parties list.

Advanced Concept Technology Demonstrations (ACTDs)
http://www.acq.osd.mil/actd/
ACTD's accomplishments, articles, speeches, guidelines, and points of contact.

Aging Systems Sustainment and Enabling Technologies (ASSET)
http://catt.bus.okstate.edu/asset/index.html
A government-academic-industry partnership. Technologies and processes developed in the ASSET program increase the DoD supply base, reduce time and cost associated with parts procurement, and enhance military readiness.

Air Force (Acquisition)
http://www.safaq.hq.af.mil/
Policy; career development and training opportunities; reducing TOC; library; links.

Air Force Materiel Command (AFMC) Contracting Laboratory's FAR Site
http://farsite.hill.af.mil/
FAR search tool; Commerce Business Daily announcements (CBDNet); Federal Register; electronic forms library.

Army Acquisition Support Center
http://asc.army.mil
News; policy; Army AL&T Magazine; programs; career information; events; training opportunities.

Assistant Secretary of the Army (Acquisition, Logistics & Technology)
https://webportal.saalt.army.mil/
ACAT Listing; ASA(ALT) Bulletin; digital documents library; ASA(ALT) organization; links to other Army acquisition sites.

Association of Old Crows (AOC)
http://www.crows.org
Association news; conventions, conferences, courses; Journal of Electronic Defense.

Commerce Business Daily
http://cbdnet.gpo.gov
Access to current and back issues with search capabilities; business opportunities; interactive yellow pages.

Committee for Purchase from People Who are Blind or Severely Disabled
http://www.jwod.gov
Information and guidance to federal customers on the requirements of the Javits-Wagner-O'Day (JWOD) Act.

Defense Acquisition University (DAU)
http://www.dau.mil
DAU Course Catalog; Defense AT&L magazine and Defense Acquisition Review journal; course schedule; policy documents; guidebooks; and training and education news for the Defense Acquisition Workforce.

DAU Alumni Association
http://www.dauaa.org
Acquisition tools and resources; government and related links; career opportunities; member forums.

DAU Distance Learning Courses
http://www.dau.mil/registrar/apply.asp
Take DAU courses online at your desk, at home, at your convenience.

Defense Advanced Research Projects Agency (DARPA)
http://www.darpa.mil
News releases; current solicitations; "Doing Business with DARPA."

Defense Electronic Business Program Office (DEBPO)
http://www.acq.osd.mil/dpap/ebiz
Policy; newsletters; Central Contractor Registration (CCR); assistance centers; DoD EC partners.

Defense Information Systems Agency (DISA)
http://www.disa.mil
Structure and mission of DISA; Defense Information System Network; Defense Message System; Global Command and Control System.

Defense Modeling and Simulation Office (DMSO)
http://www.dmso.mil
DoD Modeling and Simulation Master Plan; document library; events; services.

Defense Systems Management College (DSMC)
http://www.dau.mil
DSMC educational products and services; course schedules; job opportunities.

Defense Technical Information Center (DTIC)
http://www.dtic.mil/
Technical reports; products and services; registration with DTIC; special programs; acronyms; FAQs.

Deputy Director, Systems Engineering, USD(AT&L/IO/SE)
http://www.acq.osd.mil/io/se/index.htm
Systems engineering mission; Defense Acquisition Workforce Improvement Act information, training, and related sites; information on key areas of systems engineering responsibility.

Director, Defense Procurement and Acquisition Policy (DPAP)
http://www.acq.osd.mil/dpap
Procurement and acquisition policy news and events; reference library; DPAP organizational breakout; acquisition education and training policy and guidance.

DoD Defense Standardization Program
http://www.dsp.dla.mil
All about DoD standardization; key Points of Contact; FAQs; Military Specifications and Standards Reform; newsletters; training; nongovernment standards; links to related sites.

DoD Enterprise Software Initiative (ESI)
http://www.donimit.navy.mil/esi
Joint project to implement true software enterprise management process within DoD.

DoD Inspector General Publications
http://www.dodig.osd.mil/pubs/index.html
Audit and evaluation reports; IG testimony; planned and ongoing audit projects of interest to the acquisition community.

DoD Office of Technology Transition
http://www.dtic.mil/ott/
Information about and links to OTT's programs.

Dual Use Science & Technology (DUS&T) Program
http://www.dtic.mil/dust
Fact sheet; project information, guidance, and success stories.

Earned Value Management
http://www.acq.osd.mil/pm
Implementation of Earned Value Management; latest policy changes; standards; international developments; active noteboard.

Electronic Industries Alliance (EIA)
http://www.eia.org
Government relations department; includes links to issue councils; market research assistance.

Federal Acquisition Institute (FAI)
http://www.faionline.com
Virtual campus for learning opportunities; information access and performance support.

Federal Acquisition Jump Station
http://prod.nais.nasa.gov/pub/fed-proc/home.html
Procurement and acquisition servers by contracting activity; CBDNet; reference library.

Federal Aviation Administration (FAA)
http://www.asu.faa.gov
Online policy and guidance for all aspects of the acquisition process.

Federal Government Technology Transfer Links
http://dtica.dtic.mil/t2/orgt2.html
Manpower and Training Research Information System (MATRIS) project offers links to federal government tech transfer programs.

Federal R&D Project Summaries
http://www.osti.gov/fedrnd/about.html
Portal to information on federal research projects; search databases at different agencies.

Federal Research in Progress (FEDRIP)
http://grc.ntis.gov/fedrip.htm
Information on federally funded projects in the physical sciences, engineering, and life sciences.

Fedworld Information
http://www.fedworld.gov
Comprehensive central access point for searching, locating, ordering, and acquiring government and business information.

General Accounting Office (GAO)
http://www.gao.gov
GAO reports;policy and guidance; FAQs.

General Services Administration (GSA)
http://www.gsa.gov
Online shopping for commercial items to support government interests.

Government-Industry Data Exchange Program (GIDEP)
http://www.gidep.org/
Federally funded co-op of government-industry participants, providing electronic forum to exchange technical information

Acquisition & Logistics Excellence

An Internet Listing Tailored to the Professional Acquisition Workforce

Surfing the Net

essential to research, design, development, production, and operational phases of the life cycle of systems, facilities, and equipment.

GOV.Research_Center
http://grc.ntis.gov
U.S. Dept. of Commerce, National Technical Information Service (NTIS), and National Information Services Corporation (NISC) joint venture single-point access to government information.

Integrated Dual-Use Commercial Companies (IDCC)
http://www.idcc.org
Information for technology-rich commercial companies on doing business with the federal government.

International Society of Logistics
http://www.sole.org
Online desk references that link to logistics problem-solving advice; Certified Professional Logistician certification.

Joint Experimentation (JE) Program
http://www.jfcom.mil/about/experiment.html
The U.S. Joint Forces Command (USJFCOM)'s JE campaign plans support improvements in doctrine, interoperability, and integration for more effective use of military forces.

Joint Interoperability Test Command (JITC)
http://jitc.fhu.disa.mil
Policies and procedures for interoperability certification; lessons learned; support link .

Joint Spectrum Center (JSC)
http://www.jsc.mil
Provides operational spectrum management support to the Joint Staff and COCOMs and conducts R&D into spectrum-efficient technologies.

Library of Congress
http://www.loc.gov
Research services; Congress at Work; Copyright Office; FAQs.

MANPRINT (Manpower and Personnel Integration)
http://www.manprint.army.mil
Points of contact for program managers; relevant regulations; policy letters from the Army Acquisition Executive; briefings on the MANPRINT program.

National Aeronautics and Space Administration (NASA)'s Commercial Technology Office (CTO)
http://technology.grc.nasa.gov
Promotes competitiveness of U.S. industry through commercial use of NASA technologies and expertise.

National Contract Management Association (NCMA)
http://www.ncmahq.org
"What's New in Contracting?"; educational products catalog; career center.

National Defense Industrial Association (NDIA)
http://www.ndia.org
Association news; events; government policy; National Defense magazine.

National Geospatial-Intelligence Agency
http://www.nima.mil
Imagery; maps and geodata; Freedom of Information Act resources; publications.

National Institute of Standards and Technology (NIST)
http://www.nist.gov
Information about NIST technology, measurements, and standards programs, products, and services.

National Technical Information Service (NTIS)
http://www.ntis.gov/
Online service for purchasing technical reports, computer products, videotapes, audiocassettes.

Naval Sea Systems Command
http://www.navsea.navy.mil
Total Ownership Cost (TOC); documentation and policy; reduction plan; implementation timeline; TOC reporting templates; FAQs.

Navy Acquisition and Business Management
http://www.abm.rda.hq.navy.mil
Policy documents; training opportunities; guides on risk management, acquisition environmental issues, past performance, and more; news and assistance for the Standardized Procurement System (SPS) community; notices of upcoming events.

Navy Acquisition, Research and Development Information Center
http://www.onr.navy.mil/sci_tech
News and announcements; acronyms; publications and regulations; technical reports; how to do business with the Navy.

Navy Best Manufacturing Practices Center of Excellence
http://www.bmpcoe.org
National resource to identify and share best manufacturing and business practices in use throughout industry, government, academia.

Naval Air Systems Command (NAVAIR)
http://www.navair.navy.mil
Provides advanced warfare technology through the efforts of a seamless, integrated, worldwide network of aviation technology experts.

Office of Force Transformation
http://www.oft.osd.mil
News on transformation policies, programs, and projects throughout the DoD and the Services.

Open Systems Joint Task Force
http://www.acq.osd.mil/osjtf
Open Systems education and training opportunities; studies and assessments; projects, initiatives and plans; reference library.

Project Management Institute
http://www.pmi.org
Program management publications; information resources; professional practices; career certification.

Small Business Administration (SBA)
http://www.sbaonline.sba.gov
Communications network for small businesses.

Small Business Innovation Research (SBIR) Program and Small Business Technology Transfer (SBTT) Program
http://www.acq.osd.mil/sadbu
Program and process information; current solicitations; Help Desk information.

Software Program Managers Network
http://www.spmn.com
Site supports project managers, software practitioners, and government contractors. Contains publications on highly effective software development best practices.

Space and Naval Warfare Systems Command (SPAWAR)
https://e-commerce.spawar.navy.mil
SPAWAR business opportunities; acquisition news; solicitations; small business information.

Under Secretary of Defense (Acquisition, Technology and Logistics) (USD[AT&L])
http://www.acq.osd.mil/
USD(AT&L) documents; streaming videos; links to many other valuable sites.

USD(AT&L) Knowledge Sharing System (formerly Defense Acquisition Deskbook)
http://akss.dau.mil
Automated acquisition reference tool covering mandatory and discretionary practices.

U.S. Coast Guard
http://www.uscg.mil
News and current events; services; points of contact; FAQs.

U.S. Department of Transportation MARITIME Administration
http://www.marad.dot.gov/
Information and guidance on the requirements for shipping cargo on U.S. flag vessels.

All links current at press time. To add a non-commercial defense acquisition/acquisition and logistics excellence-related Web site to this list, please fax your request to Judith Greig, (703) 805-2917. DAU encourages the reciprocal linking of its Home Page to other interested agencies. Contact: webmaster@dau.mil.


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